NUCLEAR REGULATORY COMMISSION ISSUANCES

OPINIONS AND DECISIONS OF THE NUCLEAR REGULATORY COMMISSION WITH SELECTED ORDERS

July 1, 2005 – December 31, 2005

Volume 62
Pages 1 - 885

Prepared by the
Office of Information Services
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
(301-415-5225)

COMMISSIONERS

Nils J. Diaz, Chairman
Edward McGaffigan, Jr.*
Jeffrey S. Merrifield
Gregory B. Jaczko
Peter B. Lyons

Luis A. Reyes, Executive Director for Operations

Karen D. Cyr, General Counsel

G. Paul Bollwerk III, Chief Administrative Judge,
Atomic Safety & Licensing Board Panel

* Mr. McGaffigan began serving a third term as Commissioner on October 12, 2005.

ATOMIC SAFETY AND LICENSING BOARD PANEL

G. Paul Bollwerk III,* *Chief Administrative Judge*
Thomas S. Moore,* *Associate Chief Administrative Judge (Legal)*
Dr. Anthony J. Baratta,* *Associate Chief Administrative Judge (Technical)*
Dr. Paul B. Abramson,* *Special Associate Chief Administrative Judge (Technical/Legal)*

Members

Charles Bechhoefer
Dr. Robin Brett
Dr. Richard F. Cole*
Lee S. Dewey
Dr. Thomas S. Elleman
Michael C. Farrar*
E. Roy Hawkens*
Dr. David Hetrick
Alex S. Karlin*
Dr. Charles N. Kelber*
Dr. Peter S. Lam*
Lawrence G. McDade*
Dr. William M. Murphy
Alan S. Rosenthal
Lester S. Rubenstein
Dr. David R. Schink
Nicholas G. Trikouros
Dr. Richard E. Wardwell*
Ann M. Young*

** Full-time panel members*

PREFACE

This is the sixty-second volume of issuances (1–885) of the Nuclear Regulatory Commission and its Atomic Safety and Licensing Boards, Administrative Law Judges, and Office Directors. It covers the period from July 1, 2005, to December 31, 2005.

Atomic Safety and Licensing Boards are authorized by Section 191 of the Atomic Energy Act of 1954. These Boards, comprised of three members conduct adjudicatory hearings on applications to construct and operate nuclear power plants and related facilities and issue initial decisions which, subject to internal review and appellate procedures, become the final Commission action with respect to those applications. Boards are drawn from the Atomic Safety and Licensing Board Panel, comprised of lawyers, nuclear physicists and engineers, environmentalists, chemists, and economists. The Atomic Energy Commission (AEC) first established Licensing Boards in 1962 and the Panel in 1967.

Between 1969 and 1990, the AEC authorized Atomic Safety and Licensing Appeal Boards to exercise the authority and perform the review functions which would otherwise have been exercised and performed by the Commission in facility licensing proceedings. In 1972, that Commission created an Appeal Panel, from which were drawn the Appeal Boards assigned to each licensing proceeding. The functions performed by both Appeal Boards and Licensing Boards were transferred from the AEC to the Nuclear Regulatory Commission by the Energy Reorganization Act of 1974. Appeal Boards represented the final level in the administrative adjudicatory process to which parties could appeal. Parties, however, were permitted to seek discretionary Commission review of certain board rulings. The Commission also could decide to review, on its own motion, various decisions or actions of Appeal Boards.

On June 29, 1990, however, the Commission voted to abolish the Atomic Safety and Licensing Appeal Panel, and the Panel ceased to exist as of June 30, 1991. Since then, the Commission itself reviews Licensing Board and other adjudicatory decisions, as a matter of discretion. *See* 56 Fed. 29 & 403 (1991).

The Commission also has Administrative Law Judges appointed pursuant to the Administrative Procedure Act, who preside over proceedings as directed by the Commission.

The hardbound edition of the Nuclear Regulatory Commission Issuances is a final compilation of the monthly issuances. It includes all of the legal precedents for the agency within a six-month period. Any opinions, decisions, denials, memoranda and orders of the Commission inadvertently omitted from the monthly softbounds and any corrections submitted by the NRC legal staff to the printed softbound issuances are contained in the hardbound edition. Cross references in the text and indexes are to the NRCI page numbers which are the same as the page numbers in this publication.

Issuances are referred to as follows: Commission—CLI, Atomic Safety and Licensing Boards-LBP, Administrative Law Judges—ALJ, Directors' Decisions—DD, and Decisions on Petitions for Rulemaking—DPRM.

The summaries and headnotes preceding the opinions reported herein are not to be deemed a part of those opinions or to have any independent legal significance.

CONTENTS

Issuances of the Nuclear Regulatory Commission

AMERGEN ENERGY COMPANY, LLC
(Three Mile Island Nuclear Station, Unit 1)
Docket 50-289-LT-2
Memorandum and Order, CLI-05-25, October 26, 2005 572
DOMINION NUCLEAR CONNECTICUT, INC.
(Millstone Nuclear Power Station, Units 2 and 3)
Dockets 50-336-LR, 50-423-LR
Memorandum and Order, CLI-05-18, August 4, 2005 185
Memorandum and Order, CLI-05-24, October 26, 2005 551
DOMINION NUCLEAR NORTH ANNA, LLC
(Early Site Permit for North Anna ESP Site)
Docket 52-008-ESP
Memorandum and Order, CLI-05-17, July 28, 2005 5
EXELON GENERATION COMPANY, LLC
(Early Site Permit for Clinton ESP Site)
Docket 52-007-ESP
Memorandum and Order, CLI-05-17, July 28, 2005 5
Memorandum and Order, CLI-05-29, December 12, 2005 801
EXELON GENERATION COMPANY, LLC, and
PSEG NUCLEAR, LLC
(Peach Bottom Atomic Power Station, Units 2 and 3)
Dockets 50-277-LT, 50-278-LT
Memorandum and Order, CLI-05-26, October 26, 2005 577
LOUISIANA ENERGY SERVICES, L.P.
(National Enrichment Facility)
Docket 70-3103-ML
Memorandum and Order, CLI-05-17, July 28, 2005 5
Memorandum and Order, CLI-05-20, October 19, 2005 523
Memorandum and Order, CLI-05-21, October 19, 2005 538
Memorandum and Order, CLI-05-28, November 21, 2005 721
PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage Installation)
Docket 72-22-ISFSI
Memorandum and Order, CLI-05-16, July 22, 2005 1
Memorandum and Order, CLI-05-19, September 9, 2005 403

SYSTEM ENERGY RESOURCES, INC.
(Early Site Permit for Grand Gulf ESP Site)
Docket 52-009-ESP
Memorandum and Order, CLI-05-17, July 28, 2005 5
Memorandum and Order, CLI-05-22, October 19, 2005 542
U.S. ARMY
(Jefferson Proving Ground Site)
Docket 40-8838-MLA-2
Memorandum and Order, CLI-05-23, October 26, 2005 546
U.S. DEPARTMENT OF ENERGY
(High-Level Waste Repository)
Docket PAPO-00
Memorandum and Order, CLI-05-27, November 21, 2005 715
USEC INC.
(American Centrifuge Plant)
Docket 70-7004
Memorandum and Order, CLI-05-17, July 28, 2005 5

Issuances of the Atomic Safety and Licensing Boards

DOMINION NUCLEAR CONNECTICUT, INC.
(Millstone Nuclear Power Station, Units 2 and 3)
Dockets 50-336-LR, 50-423-LR
Memorandum and Order, LBP-05-16, July 20, 2005 56
DUKE COGEMA STONE & WEBSTER
(Savannah River Mixed Oxide Fuel Fabrication Facility)
Docket 70-03098-ML
Order, LBP-05-15, July 20, 2005 53
ENTERGY NUCLEAR VERMONT YANKEE, LLC, and
ENTERGY NUCLEAR OPERATIONS, INC.
(Vermont Yankee Nuclear Power Station)
Docket 50-271-OLA
Memorandum and Order, LBP-05-24, September 1, 2005 429
Memorandum and Order, LBP-05-32, December 2, 2005 813
Memorandum and Order, LBP-05-33, December 21, 2005 828
EXELON GENERATION COMPANY, LLC
(Early Site Permit for Clinton ESP Site)
Docket 52-007-ESP
Memorandum and Order, LBP-05-19, July 28, 2005 134

HYDRO RESOURCES, INC.
(P.O. Box 777, Crownpoint, New Mexico 87313)
Docket 40-8968-ML
Partial Initial Decision, LBP-05-17, July 20, 2005 77
Partial Initial Decision, LBP-05-26, September 16, 2005 442
NUCLEAR MANAGEMENT COMPANY, LLC
(Monticello Nuclear Generating Plant)
Docket 50-263-LR
Memorandum and Order, LBP-05-31, November 1, 2005 735
PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage Installation)
Docket 72-22-ISFSI
Memorandum and Order, LBP-05-20, May 27, 2003 187
Partial Initial Decision, LBP-05-21, May 27, 2003 248
Partial Initial Decision, LBP-05-22, May 27, 2003 328
Memorandum and Order, LBP-05-23, January 5, 2004 373
Order, LBP-05-29, October 28, 2005 635
U.S. ARMY
(Jefferson Proving Ground Site)
Docket 40-8838-MLA-2
Memorandum and Order, LBP-05-25, September 12, 2005 435
Memorandum and Order, LBP-05-30, November 1, 2005 733
U.S. DEPARTMENT OF ENERGY
(High-Level Waste Repository)
Docket PAPO-00
Memorandum and Order, LBP-05-27, September 22, 2005 478
USEC INC.
(American Centrifuge Plant)
Docket 70-7004
Memorandum and Order, LBP-05-28, October 7, 2005 585
YANKEE ATOMIC ELECTRIC COMPANY
(Yankee Nuclear Power Station)
Docket 50-29-OLA
Memorandum and Order, LBP-05-18, July 21, 2005 126

Issuances of Directors' Decisions

ATK TACTICAL SYSTEMS COMPANY, LLC
Docket 40-08850 (License No. SUB-1440)
Director's Decision, DD-05-8, December 30, 2005 866
BOILING-WATER REACTORS OF MARK I AND II DESIGN
Director's Decision, DD-05-4, November 7, 2005 782

DEPARTMENT OF THE AIR FORCE
Docket 30-28641
Director's Decision, DD-05-8, December 30, 2005 866
DEPARTMENT OF THE ARMY
Dockets 40-06394, 40-07086, 40-08814, 40-08838, 40-07354, 40-08779, 40-08767
Director's Decision, DD-05-8, December 30, 2005 866
DEPARTMENT OF THE NAVY
Docket 30-29462
Director's Decision, DD-05-8, December 30, 2005 866
ENTERGY NUCLEAR VERMONT YANKEE, LLC, and
ENTERGY NUCLEAR OPERATIONS, INC.
(Vermont Yankee Nuclear Power Station)
Docket 50-271
Director's Decision, DD-05-2, August 16, 2005 389
Director's Decision, DD-05-3, November 7, 2005 765
Director's Decision, DD-05-7, December 23, 2005 862
EXELON GENERATION COMPANY, LLC
(Byron Station, Unit 1)
Docket STN 50-454
Director's Decision, DD-05-5, November 8, 2005 791
FIRSTENERGY NUCLEAR OPERATING COMPANY
(Beaver Valley Power Station, Units 1 and 2)
Dockets 50-334, 50-412
Director's Decision, DD-05-6, December 3, 2005 855

Indexes

Case Name Index I-1
Legal Citations Index I-5
Cases I-5
Regulations I-45
Statutes I-67
Others I-71
Subject Index I-75
Facility Index I-117

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nils J. Diaz, Chairman
Jeffrey S. Merrifield
Gregory B. Jaczko
Peter B. Lyons

In the Matter of **Docket No. 72-22-ISFSI**

PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage Installation) **July 22, 2005**

RULES OF PRACTICE: FINDINGS OF FACT

COMMISSION PROCEEDINGS: APPELLATE REVIEW

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.786(b)(4)(i))

ADJUDICATORY HEARINGS: RESOLUTION OF FACTUAL ISSUES

RULES OF PRACTICE: DEFERENCE TO LICENSING BOARD

Absent a showing that the Board's fact-specific rulings were ''clearly erroneous'' (10 C.F.R. § 2.786(b)(4)(i)), i.e., ''*not even plausible* in light of the record viewed in its entirety'' (*Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-05-1, 61 NRC 160, 174 (2005)), the Commission generally defers to the Board on matters of factual findings (*id.* at 174, 175).

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY; SPECIFICITY AND BASIS)

ADMISSIBILITY OF CONTENTIONS

The Commission does not consider bare, unsupported assertions in our adjudications. *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-00-5, 51 NRC 90, 98 (2000).

RULES OF PRACTICE: ISSUES ON APPEAL; UNTIMELY SUBMISSION OF ARGUMENT

COMMISSION PROCEEDINGS: APPELLATE REVIEW

The Commission rejects arguments that are filed, without justification, for the first time on appeal. *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 260 (1996), and cited authority; 10 C.F.R. § 2.786(b)(5).

MEMORANDUM AND ORDER

On May 12, 2005, Intervenor State of Utah filed a petition for discretionary Commission review of the Licensing Board's April 25, 2005 unpublished Memorandum and Order. In that order, the Board had approved many of Private Fuel Storage's (''PFS'') proposed redactions of passages in the Board's prior ''financial assurance'' and ''decommissioning funding assurance'' decisions and also many of PFS's proposed redactions of associated documents in the administrative record. We deny Utah's petition in all respects but one.

Utah asks us to set aside various Board-approved redactions on one or more of the following grounds: (i) some of the material has already been publicly disclosed,[1] (ii) the Board redacted certain of Utah's assertions but disclosed PFS's and the Staff's responses to those assertions,[2] (iii) redactions of PFS's passthrough of transportation costs lack sufficient basis,[3] and (iv) some redactions are either misleading[4] or broader than necessary to protect proprietary information.[5] Utah also requests, for the first time in this proceeding, the public release of eleven passages from the hearing transcript.[6]

On May 23d, PFS filed a response opposing all but a small portion of Utah's petition, on the ground that Utah had not satisfied the requirements for Commission review set forth in 10 C.F.R. § 2.786(b)(4) — our regulation establishing the standards for obtaining discretionary Commission review.[7] PFS did, however, agree that certain portions of the Board's decisions are now in the

[1] Petition for Review at 3.

[2] *Id.* at 3-4, 6.

[3] *Id.* at 4-7.

[4] *Id.* at 7.

[5] *Id.* at 8.

[6] *Id.*

[7] Although the Commission revised its procedural rules last year (60 Fed. Reg. 2182 (Jan. 14, 2004)), those revised rules do not apply to this proceeding. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-05-1, 61 NRC 160, 162 n.5 (2005). Hence, we apply our former section 2.786(b)(4) & (5) in this Order.

public domain and that PFS is no longer pursuing their redaction. Also on May 23d, the NRC Staff filed a similar response opposing all of Utah's petition except for the portion involving previously disclosed material.

Utah has not addressed its burden of showing ''a substantial question'' on the types of issues that may merit Commission review.[8] Moreover, absent a showing that the Board's fact-specific rulings were ''clearly erroneous,''[9] i.e., ''*not even plausible* in light of the record viewed in its entirety,''[10] we generally defer to the Board on matters of factual findings such as these.[11] For the most part, we see no reason to do otherwise here.

We decline to deny Utah's entire petition summarily, however, because both PFS and the NRC Staff have agreed that some of the material the Board redacted is now in the public domain.[12] PFS has identified five passages containing the now-public information.[13] To that limited extent, we will grant Utah's petition and instruct the Board not to redact those passages.

Other than the five instances cited by PFS, we cannot accept Utah's assertion that the Board has redacted information already in the public domain. Utah's support for this claim is unconvincing. For instance, Utah supports its request for public release of passages addressing specific cost categories by referring us to statements in documents indicating that PFS plans generally to pass through its costs to its customers. But Utah never explains — nor do we see — why the public's current access to *general* statements about PFS's cost-passthrough intentions somehow justifies releasing information on *specific* cost categories (e.g., estimates), or on how those *specific* costs are to be passed through, or on how PFS intends to assure its customers' payment of those *specific* costs. Indeed, we addressed these same points in general terms earlier in this proceeding, when we ruled that information about specific cost categories and the details of PFS's specific cost-passthrough arrangement were proprietary and should be redacted.[14]

Next, Utah argues that the Board erred in redacting some of Utah's arguments but not PFS's and the Staff's responses to those arguments. Utah appears to imply that the Board's motivation was to avoid embarrassing PFS and the NRC Staff.[15] We interpret the Board's decision quite differently. In our view, what the Board intended to avoid was not embarrassment to two of the parties but rather — quite properly — the improper release of proprietary commercial information. The

---

[8] 10 C.F.R. § 2.786(b)(4).

[9] 10 C.F.R. § 2.786(b)(4)(i).

[10] *Private Fuel Storage,* CLI-05-1, 61 NRC at 174 (emphasis added; footnote omitted).

[11] *Id.* at 174, 175.

[12] PFS's May 23d Response at 3, 4 n.11; NRC Staff's May 23d Response at 2.

[13] PFS's May 23d Response at 4 n.11.

[14] CLI-05-1, 61 NRC at 171, 173-79, 182. *See also* CLI-05-8, 61 NRC 129 (2005).

[15] Petition for Review at 3.

Board properly drew a distinction between Utah's arguments which contained proprietary information about the terms of PFS's Model Service Agreement, and PFS's and the Staff's arguments which contained no such information.

We also reject Utah's general argument that the redactions were broader than necessary to protect PFS's proprietary information. Utah provides no reasoned basis for this claim. As we have repeatedly stated, we do not consider bare, unsupported assertions in our adjudications.[16]

And finally, we reject Utah's last-minute challenge to the redaction of eleven passages in the hearing transcript. Utah offers no justification, as required under our rules governing late-filed arguments, why it should be permitted to raise this argument for the first time on appeal.[17]

In sum, we deny Utah's petition for review except insofar as it pertains to the five passages cited in footnote 11 of PFS's May 23d Response. We direct the Board to lift its redaction of those passages.

IT IS SO ORDERED.

For the Commission[18]

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 22d day of July 2005.

[16] *See, e.g., Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-00-5, 51 NRC 90, 98 (2000).

[17] *See, e.g., Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 260 (1996), and cited authority; 10 C.F.R. § 2.786(b)(5).

[18] Commissioner Merrifield was not present when this item was affirmed. Accordingly the formal vote of the Commission was 3-0 in favor of the decision. Commissioner Merrifield, however, had previously voted to approve this Memorandum and Order and had he been present he would have affirmed his prior vote.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nils J. Diaz, Chairman
Jeffrey S. Merrifield
Gregory B. Jaczko
Peter B. Lyons

In the Matter of	**Docket No. 52-007-ESP**
EXELON GENERATION COMPANY, LLC **(Early Site Permit for Clinton ESP Site)**	
In the Matter of	**Docket No. 52-008-ESP**
DOMINION NUCLEAR NORTH ANNA, LLC **(Early Site Permit for North Anna ESP Site)**	
In the Matter of	**Docket No. 52-009-ESP**
SYSTEM ENERGY RESOURCES, INC. **(Early Site Permit for Grand Gulf ESP Site)**	
In the Matter of	**Docket No. 70-3103-ML**
LOUISIANA ENERGY SERVICES, L.P. **(National Enrichment Facility)**	
In the Matter of	**Docket No. 70-7004**
USEC INC. **(American Centrifuge Plant)**	**July 28, 2005**

MANDATORY HEARINGS

RULES OF PRACTICE: MANDATORY HEARINGS; EARLY SITE PERMIT APPLICATIONS

AEA: SECTION 189a; SECTION 193(b)(1)

The mandatory hearing requirement stems from section 189a of the Atomic Energy Act (''AEA''), which provides that ''[t]he Commission *shall* hold a hearing . . . on each application under section 103 or 104b for a construction permit for a [utilization or production] facility.'' 42 U.S.C. § 2239(a) (emphasis added). In addition, section 193(b)(1) of the AEA specifically provides that ''[t]he Commission *shall* conduct a single adjudicatory hearing with regard to the licensing of construction and operation of a uranium enrichment facility under sections 53 and 63.'' 42 U.S.C. § 2243(b)(1) (emphasis added).

MANDATORY HEARINGS

RULES OF PRACTICE: MANDATORY HEARINGS; EARLY SITE PERMIT APPLICATIONS

AEA: MANDATORY HEARINGS

PRICE-ANDERSON ACT

The Atomic Energy Acts of 1946 and 1954 contained no mandatory hearing requirement. That idea originated with Senator Clinton B. Anderson in 1956. The original version of the statutory ''mandatory hearing'' requirement appeared the following year in section 7 of the Price-Anderson Act, was applicable to *all* Atomic Energy Commission licensing applications, and remained in effect from 1957 until 1962. At the time Congress passed the Price-Anderson Act in 1957, the AEC was issuing construction permits without prior notice to the public and generally without a public hearing. Moreover, the AEC was basing its construction permit decisions on reactor safety evaluations that were likewise unavailable to the public. These practices raised significant issues of public and congressional confidence in the agency, the need for separation of prosecutorial and quasi-judicial functions, and the need for a quasi-judicial body independent of the portion of the AEC that itself operated or promoted reactors. Senator Anderson, the Vice-Chairman of the Joint Committee on Atomic Energy, explained that the mandatory hearing requirement was intended to address open-government and public-confidence issues associated with the Commission's treatment of applications for power reactor construction permits. When Congress next considered the mandatory hearing requirement in 1962, it amended section 189a to confine the requirement to construction permit applications only. This contraction of the mandatory hearing requirement resulted from Congress's belief

that separate hearings at both the construction permit and operating license stages constituted ''overjudicialization'' of the licensing process. That's where the mandatory hearing requirement stands today.

MANDATORY HEARINGS

RULES OF PRACTICE: MANDATORY HEARINGS; EARLY SITE PERMIT APPLICATIONS

Various NRC regulations implement the mandatory hearing requirement. For Early Site Permits (ESPs), the governing provision is 10 C.F.R. § 52.21. *See* ''Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Reactors,'' 54 Fed. Reg. 15,372 (Apr. 18, 1989). For uranium enrichment facilities, the governing provisions are 10 C.F.R. § 70.23a and 10 C.F.R. § 70.31(e). *See* Changes to Adjudicatory Process, 69 Fed. Reg. 2182 (Jan. 14, 2004), *petition for review denied sub nom. Citizens Awareness Network v. United States,* 391 F.2d 338 (1st Cir. 2004); Final Rule: ''Uranium Enrichment Regulations,'' 57 Fed. Reg. 18,388 (Apr. 30, 1992). The Commission also has promulgated a procedural rule — 10 C.F.R. § 2.104(b) — specifying the issues to be addressed in both contested and uncontested construction permit proceedings.

MANDATORY HEARINGS

RULES OF PRACTICE: CONTESTED PROCEEDINGS

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.4)

Under the Commission's regulations, an application is considered ''contested'' if ''(1) . . . there is a controversy between the staff of the Commission and the applicant . . . concerning the issuance of the license or any of the terms . . . thereof, or (2) . . . a petition for leave to intervene in opposition to an application . . . has been granted or is pending before the Commission.'' 10 C.F.R. § 2.4.

MANDATORY HEARINGS

RULES OF PRACTICE: CONTESTED PROCEEDINGS

LICENSING BOARD(S): RESPONSIBILITIES

AEA: STANDARD FOR REVIEW

NEPA: STANDARD FOR REVIEW

For hearings on *contested* applications, section 2.104(b)(1) requires the Licensing Board to ''consider'':

(i) Whether in accordance with the provisions of § 50.35(a) of [10 C.F.R., regarding the issuance of construction permits for nuclear power reactors]:

(*a*) The applicant has described the proposed design of the facility, including, but not limited to, the principal architectural and engineering criteria for the design, and has identified the major features or components incorporated therein for the protection of the health and safety of the public;

(*b*) Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration will be supplied in the final safety analysis report;

(*c*) Safety features or components, if any, which require research and development, have been described by the applicant and the applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components; and

(*d*) On the basis of the foregoing, there is reasonable assurance that (*1*) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of the proposed facility; and (*2*) taking into consideration the site criteria contained in Part 100 of this chapter, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

(ii) Whether the applicant is technically qualified to design and construct the proposed facility;

(iii) Whether the applicant is financially qualified to design and construct the proposed facility;

(iv) Whether the issuance of a permit for the construction of the facility will be inimical to the common defense and security or to the health and safety of the public;

(v) If the application is for a construction permit for a nuclear power reactor, a testing facility, a fuel reprocessing plant, or other facility whose construction or operation has been determined by the Commission to have a significant impact on the environment, whether, in accordance with the requirements of subpart A of part 51 of this chapter, the construction permit should be issued as proposed.

The first four of these requirements stem from the AEA, while the fifth derives from the National Environmental Policy Act of 1969 (''NEPA''), 42 U.S.C. § 4321.

MANDATORY HEARINGS

RULES OF PRACTICE: UNCONTESTED PROCEEDINGS

LICENSING BOARD(S): RESPONSIBILITIES

AEA: STANDARD FOR REVIEW

NEPA: STANDARD FOR REVIEW

For *uncontested* applications, section 2.104(b)(2) requires the Board to ''determine'':

> (i) Without conducting a de novo evaluation of the application, whether the application and the record of the proceeding contain sufficient information, and the review of the application by the Commission's staff has been adequate to support affirmative findings on (b)(1) (i) through (iii) specified in this section [10 C.F.R. § 2.104] and a negative finding on (b)(1)(iv) specified in this section proposed to be made and the issuance of the construction permit proposed by the Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, and
>
> (ii) If the application is for a construction permit for a nuclear power reactor, a testing facility, a fuel processing plant, a uranium enrichment facility, or other facility whose construction or operation has been determined by the Commission to have a significant impact on the environment, whether the review conducted by the Commission pursuant to [NEPA] has been adequate.

The first of these requirements stems from the AEA, the second from NEPA.

MANDATORY HEARINGS

RULES OF PRACTICE: CONTESTED PROCEEDING; UNCONTESTED PROCEEDING

NEPA: BASELINE ISSUES; EARLY SITE REVIEW; HEARING

LICENSING BOARD(S): RESPONSIBILITIES

NEPA: STANDARD FOR REVIEW

Whether or not the application is contested, the Commission's regulations (10 C.F.R. § 51.105(a)(1)-(3)) give the Board special responsibility for three ''baseline NEPA issues.'' The Board must:

> (1) Determine whether the requirements of section 102(2)(A), (C) and (E) of [NEPA] and the regulations in this subpart [10 C.F.R. Part 51, Subpart A] have been met;

(2) Independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken; and

(3) Determine, after weighing the environmental, economic, technical, and other benefits against environmental and other costs, and considering reasonable alternatives, whether the construction permit . . . should be issued, denied, or appropriately conditioned to protect environmental values.

MANDATORY HEARINGS

RULES OF PRACTICE: UNCONTESTED PROCEEDINGS; BOARDS (STANDARD OF REVIEW)

ADJUDICATORY BOARDS: STANDARD OF REVIEW

ADJUDICATORY HEARINGS: STANDARD OF REVIEW

ADJUDICATORY PROCEEDINGS: STANDARD OF REVIEW

LICENSING BOARD(S): RESPONSIBILITIES

AEA: STANDARD FOR REVIEW

NEPA: STANDARD FOR REVIEW

The Commission expects licensing boards conducting mandatory hearings on uncontested issues to take an independent ''hard look'' at NRC Staff safety and environmental findings, but not to replicate NRC Staff work. Giving appropriate deference to NRC Staff technical expertise, boards are to probe the logic and evidence supporting NRC Staff findings and decide whether those findings are sufficient to support license issuance.

MANDATORY HEARINGS

RULES OF PRACTICE: CONTESTED PROCEEDING; UNCONTESTED PROCEEDING; CONTESTED ISSUES; UNCONTESTED ISSUES

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.104(b), 10 C.F.R. § 51.105(a)(4) & (5))

LICENSING BOARD(S): RESPONSIBILITIES

AEA: STANDARD FOR REVIEW

NEPA: STANDARD FOR REVIEW

The Commission's regulations assign a different review function to licensing boards depending on whether a case is ''contested'' or ''uncontested,'' with the former requiring ''the more intense scrutiny afforded by the adversarial process.'' *Louisiana Power and Light Co.* (Waterford Steam Electric Station, Unit 3), ALAB-732, 17 NRC 1076, 1112 (1983). The Chief Administrative Judge certified to the Commission in these proceedings the question whether the ''contested'' or ''uncontested'' designations apply to the proceeding as a whole or instead to each issue of each proceeding. The Commission's key regulations, 10 C.F.R. § 2.104(b) and 10 C.F.R. § 51.105(a)(4) & (5), refer simply to contested or uncontested ''proceedings,'' not to issues. But some parties in the Early Site Permit cases urged their boards to bifurcate contested proceedings into contested or uncontested ''portions.'' The Commission concludes that the contested and uncontested designations apply issue-by-issue, and not to proceedings-at-large.

MANDATORY HEARINGS

RULES OF PRACTICE: CONTESTED PROCEEDING; UNCONTESTED PROCEEDING; CONTESTED ISSUES; UNCONTESTED ISSUES

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.104(b), 10 C.F.R. § 51.105(a)(4) & (5))

Historically, when faced with the ''contested'' versus ''uncontested'' question, the Commission's licensing boards have repeatedly distinguished between the contested and uncontested ''*portion*'' of proceedings. That distinction dates back to at least 1966, when in a policy statement the AEC made clear the issue-by-issue nature of boards' ''mandatory'' decisionmaking duties.

MANDATORY HEARINGS

RULES OF PRACTICE: CONTESTED PROCEEDING; UNCONTESTED PROCEEDING; CONTESTED ISSUES; UNCONTESTED ISSUES

AEA: STANDARD FOR REVIEW

NEPA: STANDARD FOR REVIEW

The Commission's longstanding practice of treating contested and uncontested issues differently is grounded in sound policy. First, it leaves to the expert NRC technical staff prime responsibility for technical fact-finding on uncontested matters. Second, it promotes efficient case management and prompt decisionmaking by concentrating the boards' attention on resolving disputes rather than redoing NRC Staff work. The Commission emphasized in the *LES* hearing notice the importance we attach to resolving licensing adjudications promptly. The Commission specifically stated that it would seek to ''avoid unnecessary delays'' and ''endeavor to identify efficiencies . . . to further reduce the time the agency needs to complete reviews and reach decisions'' in such proceedings. *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-3, 59 NRC 10, 16 (2004). The Commission instructed the Board to ''expeditiously decide legal and policy issues'' and also to follow the guidance in the Commission's *Statement of Policy on Conduct of Adjudicatory Proceedings,* CLI-98-12, 48 NRC 18 (1998) — which was intended, among other things, to expedite the completion of adjudications without sacrificing fairness. *LES,* CLI-04-3, 59 NRC at 17. *See also Statement of Policy on Conduct of Licensing Proceedings,* CLI-81-8, 13 NRC 452, 453 (1981).

MANDATORY HEARINGS

RULES OF PRACTICE: CONTESTED PROCEEDING; UNCONTESTED PROCEEDING; CONTESTED ISSUES; UNCONTESTED ISSUES; BOARDS (STANDARD OF REVIEW)

ADJUDICATORY BOARDS: STANDARD OF REVIEW

ADJUDICATORY HEARINGS: STANDARD OF REVIEW

ADJUDICATORY PROCEEDINGS: STANDARD OF REVIEW

LICENSING BOARD(S): RESPONSIBILITIES

AEA: STANDARD FOR REVIEW

NEPA: STANDARD FOR REVIEW

The use of a deferential review standard for uncontested issues supports these policies of promptness and efficiency. If only a portion of a proceeding's issues

are in dispute, it makes no sense for a licensing board to proceed as if the entire adjudication is contested, with consequently greater demands on the parties' and the board's time and resources. As the Commission's Appeal Board concluded when examining this issue many years ago, ''the only reasonable interpretation'' distinguishes ''between *issues* in contest and *matters* which have not been placed in controversy.'' *Gulf States Utilities Co.* (River Bend Station, Units 1 and 2), ALAB-444, 6 NRC 760, 774 n.26 (1977) (emphases in original). *See also Union of Concerned Scientists v. AEC,* 499 F.2d 1069, 1077 (D.C. Cir. 1974); 10 C.F.R. Part 2, former Appendix A, § V(f)(1) (2004). The Board ''must resolve the controversy'' itself, as a *de novo* matter. *River Bend Station,* ALAB-444, 6 NRC at 774 n.26. But with respect to uncontested matters, the Board must merely ''decide whether the *Staff's* review has been adequate to support [its] findings.'' *Id.* (emphasis added).

MANDATORY HEARINGS

RULES OF PRACTICE: CONTESTED ISSUES; UNCONTESTED ISSUES; BOARDS (STANDARD OF REVIEW)

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.104(b), 10 C.F.R. § 51.105)

ADJUDICATORY BOARDS: STANDARD OF REVIEW

ADJUDICATORY HEARINGS: STANDARD OF REVIEW

ADJUDICATORY PROCEEDINGS: STANDARD OF REVIEW

LICENSING BOARD(S): RESPONSIBILITIES

AEA: STANDARD FOR REVIEW

NEPA: STANDARD FOR REVIEW

As a general matter licensing boards *should* review contested and uncontested issues differently, giving the NRC Staff considerably more deference on uncontested issues. But the Commission does not rest that conclusion on any distinction between the terms ''consider'' and ''determine,'' which in the current context we see as essentially synonymous.

The regulatory history of the 1966 rulemaking (and subsequent rulemakings), together with hearing notices the AEC issued under section 2.104(b), shows that the AEC was using the words ''determine'' and ''consider'' synonymously.

MANDATORY HEARINGS

RULES OF PRACTICE: CONTESTED ISSUES; UNCONTESTED ISSUES; BOARDS (STANDARD OF REVIEW)

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.104(b), 10 C.F.R. § 51.105)

ADJUDICATORY BOARDS: STANDARD OF REVIEW

ADJUDICATORY HEARINGS: STANDARD OF REVIEW

ADJUDICATORY PROCEEDINGS: STANDARD OF REVIEW

The present cases are not the first instances of confusion regarding the agency regulations' use of the terms ''determine'' and ''consider.'' For example, during the late 1960s, licensing boards indicated three times (without comment) that the AEC's hearing notices in uncontested proceedings had instructed the boards to ''consider'' (rather than the regulation's word ''determine'') issues. *Tennessee Valley Authority,* 4 AEC 136 (1968); *Wisconsin Michigan Power Co.* (Point Beach, Unit 1), 4 AEC 3, 3-4 (1967); *Tennessee Valley Authority* (Browns Ferry, Units 1 and 2), 3 AEC 209, 209-10 (1967). The confusion emanates from a 1966 AEC rulemaking promulgating the original version of section 2.104(b). That version was quite similar to today's, and included the same ''determine'' — ''consider'' dichotomy.

MANDATORY HEARINGS

RULES OF PRACTICE: CONTESTED ISSUES; UNCONTESTED ISSUES; BOARDS (STANDARD OF REVIEW)

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.104(b), 10 C.F.R. § 51.105)

ADJUDICATORY BOARDS: STANDARD OF REVIEW

ADJUDICATORY HEARINGS: STANDARD OF REVIEW

ADJUDICATORY PROCEEDINGS: STANDARD OF REVIEW

LICENSING BOARD(S): RESPONSIBILITIES

AEA: STANDARD FOR REVIEW

NEPA: STANDARD FOR REVIEW

Nothing of importance turns on the difference between the terms ''determine'' and ''consider.'' Obviously, the *raison d'etre* of the Commission's licensing boards is to decide issues, whether contested or uncontested. So even when

the Commission's regulations merely direct boards to ''consider'' questions, the Commission anticipates that boards will go on to *decide* them as well. The Commission reminds the boards, however, that their review of a contested issue is quite different from their review of an uncontested one, and that this difference is reflected, to a considerable extent, in the *depth* of the boards' review (i.e., *de novo* or not).

MANDATORY HEARINGS

RULES OF PRACTICE: CONTESTED ISSUES; UNCONTESTED ISSUES; BOARDS (STANDARD OF REVIEW)

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.325)

ADJUDICATORY BOARDS: STANDARD OF REVIEW

ADJUDICATORY HEARINGS: STANDARD OF REVIEW

ADJUDICATORY PROCEEDINGS: STANDARD OF REVIEW

LICENSING BOARD(S): RESPONSIBILITIES

AEA: STANDARD FOR REVIEW

NEPA: STANDARD FOR REVIEW

The boards should conduct a simple ''sufficiency'' review of uncontested AEA and NEPA issues, not a *de novo* review. Only when resolving contentions litigated through the adversary process must the boards bring their own ''*de novo*'' judgment to bear. In such cases, boards must decide, based on governing regulatory standards and the evidence submitted, whether the applicant has met its burden of proof (except where the NRC Staff has the burden). *See* 10 C.F.R. § 2.325. But when considering safety and environmental matters not subject to the adversarial process — so-called ''uncontested'' issues — the boards should decide simply whether the safety and environmental record is ''sufficient'' to support license issuance. In other words, the boards should inquire whether the NRC Staff performed an adequate review and made findings with reasonable support in logic and fact. *See, e.g., All Chemical Isotope Enrichment, Inc.* (AlChemIE Facility-1 CPDF; Facility-2, Oliver Springs), ALAB-913, 29 NRC 99, 268 (1989). ''An analogy is to the function of an appellate court, applying the 'substantial evidence' test, although it is imperfect because the ASLB looks not only to the information in the record, but also to the thoroughness of the review that the Staff . . . has given it.'' *Union of Concerned Scientists,* 499 F.2d at 1076.

The NRC regulations arguably introduce confusion in this area. The Commission's regulations expressly prohibit *de novo* board review of uncontested AEA issues, but do not apply the bar to NEPA issues. But nothing in the NRC's

regulations or hearing notices *directs* boards to engage in *de novo* review of uncontested AEA *or* NEPA issues. Today the Commission decides as a general matter that *de novo* review of uncontested issues is prohibited, whether the issues arise under the AEA or NEPA. This decision rejecting *de novo* review overrides any ambiguity or uncertainty deriving from our regulations or notices.

MANDATORY HEARINGS

RULES OF PRACTICE: BOARDS (STANDARD OF REVIEW)

NEPA: BASELINE ISSUES; EARLY SITE REVIEW; HEARING

ADJUDICATORY BOARDS: STANDARD OF REVIEW

ADJUDICATORY HEARINGS: STANDARD OF REVIEW

ADJUDICATORY PROCEEDINGS: STANDARD OF REVIEW

LICENSING BOARD(S): RESPONSIBILITIES

NEPA: STANDARD FOR REVIEW

The Commission holds, elsewhere in this Order, that certain so-called ''baseline'' NEPA conclusions require independent licensing board judgments that some might consider tantamount to *de novo* review. Even there, however, the NRC Staff's underlying technical and factual findings are not open to board reconsideration unless, after a review of the record, the board finds the NRC Staff review inadequate or its findings insufficient.

MANDATORY HEARINGS

RULES OF PRACTICE: UNCONTESTED ISSUES; BOARDS (STANDARD OF REVIEW)

ADJUDICATORY BOARDS: STANDARD OF REVIEW

ADJUDICATORY HEARINGS: STANDARD OF REVIEW

ADJUDICATORY PROCEEDINGS: STANDARD OF REVIEW

LICENSING BOARD(S): RESPONSIBILITIES

NEPA: STANDARD FOR REVIEW

This is not to say that the Commission expects its licensing boards to follow a cursory, hands-off approach to uncontested NRC Staff findings. On the contrary, the Commission anticipates that its boards will carefully probe those findings by asking appropriate questions and by requiring supplemental information when

necessary, and thereby undertake the kind of ''truly independent review'' (*Calvert Cliffs,* 449 F.2d at 1118) that Congress anticipated when it established the mandatory hearing requirement.

MANDATORY HEARINGS

RULES OF PRACTICE: UNCONTESTED ISSUES; BOARDS (STANDARD OF REVIEW)

ADJUDICATORY BOARDS: STANDARD OF REVIEW

ADJUDICATORY HEARINGS: STANDARD OF REVIEW

ADJUDICATORY PROCEEDINGS: STANDARD OF REVIEW

LICENSING BOARD(S): RESPONSIBILITIES

AEA: STANDARD FOR REVIEW

NEPA: STANDARD FOR REVIEW

From the start, it was understood that a ''truly independent review'' at mandatory hearings meant that licensing boards were not to rubber stamp the findings of the NRC Staff. The boards' role is to constitute a check on the understanding of the Staff and to decide whether the Staff's safety findings, on which so much depends, were the right ones. But truly independent review by licensing boards, in the interest of public safety, does not mean that multiple reviews of the same *uncontested* issues — first by the NRC Staff, then by the ACRS, and finally by a licensing board — would be necessary to serve this purpose. Rather, full-scale (or *de novo*) board review of uncontested issues would amount, as was feared in 1962 when Congress confined the mandatory hearing requirement to construction permit applications only, to overjudicializing the process. It defies common sense for the NRC to insist that both it and its applicants expend the same kind of ''*de novo*'' judicial effort for uncontested issues as for contested ones.

MANDATORY HEARINGS

RULES OF PRACTICE: UNCONTESTED ISSUES; BOARDS (STANDARD OF REVIEW)

ADJUDICATORY BOARDS: STANDARD OF REVIEW

ADJUDICATORY HEARINGS: STANDARD OF REVIEW

ADJUDICATORY PROCEEDINGS: STANDARD OF REVIEW

LICENSING BOARD(S): RESPONSIBILITIES

AEA: STANDARD FOR REVIEW

NEPA: STANDARD FOR REVIEW

Applying a less stringent ''sufficiency'' standard when examining uncontested issues merely recognizes ''the inherent limitations on a board's review of a matter not in contest and therefore not subject to the more intense scrutiny afforded by the adversarial process.'' *Waterford,* ALAB-732, 17 NRC at 1112. ''As a practical matter . . . it would simply not be possible for the two technical members of the panel to evaluate the totality of the material relevant to safety matters that the Staff and ACRS have generated through many months of work. This fact is so obvious that it borders on the ludicrous to suggest that Congress intended the [licensing boards] to so function.'' *Union of Concerned Scientists,* 499 F.2d at 1077.

MANDATORY HEARINGS

RULES OF PRACTICE: EVIDENCE

EVIDENCE

ADJUDICATORY HEARINGS: EVIDENCE

LICENSING BOARD(S): RESPONSIBILITIES

AEA: STANDARD FOR REVIEW

NEPA: STANDARD FOR REVIEW

The Commission does not believe the licensing boards must demand that *all possible views* and *facts* relating in any way to the matters in question must be placed in the evidentiary record. Rather, the licensing boards need only ensure that the evidentiary record contains evidence sufficient to allow them to make a decision on the ultimate question of safety.

MANDATORY HEARINGS

RULES OF PRACTICE: UNCONTESTED ISSUES; BOARDS (STANDARD OF REVIEW)

ADJUDICATORY BOARDS: STANDARD OF REVIEW

ADJUDICATORY HEARINGS: STANDARD OF REVIEW

ADJUDICATORY PROCEEDINGS: STANDARD OF REVIEW

LICENSING BOARD(S): RESPONSIBILITIES

AEA: STANDARD FOR REVIEW

NEPA: STANDARD FOR REVIEW

The Commission's past rulemakings and adjudications give useful guidance on how licensing boards should proceed when examining uncontested issues. Boards are not to conduct a *de novo* evaluation of the application, but rather test the adequacy of the Staff's review. In doing so, boards have authority to ask clarifying questions of witnesses, to order the record to be supplemented, to reject the proposed action, or even to deny the construction permit outright, and to set conditions on the approval of the construction permit.

MANDATORY HEARINGS

RULES OF PRACTICE: HEARINGS

AEA: SECTIONS 189a AND 193(b)(1) (MANDATORY HEARING)

As for the actual procedure to be followed at mandatory hearings, licensing boards have considerable flexibility. The AEA's mandatory hearing requirements in sections 189a and 193(b)(1) are phrased generally. ''[T]he Act itself nowhere prescribes the content of a hearing or prescribes the manner in which this 'hearing' is to be run.'' *Union of Concerned Scientists v. NRC,* 920 F.2d 50, 53 (D.C. Cir. 1990). *See also Sholly v. NRC,* 651 F.2d 780, 791 n.27 (D.C. Cir. 1980), *vacated on other grounds,* 459 U.S. 1194 (1983).

MANDATORY HEARINGS

RULES OF PRACTICE: HEARINGS

The word ''hearing'' can refer to any of a number of events, including trial-type evidentiary hearings, paper hearings, paper hearings accompanied by oral arguments, hearings employing a mixture of procedural rules, and legislative

hearings. The AEA's hearing requirement does not demand a ''one size fits all'' approach.

MANDATORY HEARINGS

RULES OF PRACTICE: HEARINGS (SUFFICIENCY REVIEW)

AEA: HEARINGS

A ''sufficiency'' review of uncontested issues may, for example, prove suited to NRC Staff summaries of key safety and environmental findings, along with witnesses (from the NRC Staff, on the one hand, and separately from the license applicant) prepared to answer board inquiries.

MANDATORY HEARINGS

RULES OF PRACTICE: HEARINGS

LICENSING BOARD(S): RESPONSIBILITIES

Or, if the uncontested issues prove relatively straightforward, a simple ''paper'' review may suffice. Thus, the Commission does not dictate any particular procedure in the current cases, but would expect the boards to select the most appropriate and expeditious approach given the specific circumstances of a case.

MANDATORY HEARINGS

RULES OF PRACTICE: UNCONTESTED ISSUES

NEPA: BASELINE ISSUES; EARLY SITE REVIEW; HEARING

REGULATIONS: INTERPRETATION (10 C.F.R. § 51.105(a)(2))

RULES OF PRACTICE: BOARD (STANDARD OF REVIEW)

ADJUDICATORY BOARDS: STANDARD OF REVIEW

ADJUDICATORY HEARINGS: STANDARD OF REVIEW

ADJUDICATORY PROCEEDINGS: STANDARD OF REVIEW

LICENSING BOARD(S): RESPONSIBILITIES

NEPA: STANDARD FOR REVIEW

The Commission's holding that it does not generally expect *de novo* board review of uncontested issues applies fully to the three NEPA baseline issues insofar as NRC Staff factual or technical judgments are concerned. But boards must

''[*i*]*ndependently* consider the final balance among conflicting factors contained in the record of the proceeding.'' 10 C.F.R. § 51.105(a)(2).

MANDATORY HEARINGS

RULES OF PRACTICE: BOARD (STANDARD OF REVIEW)

NEPA: EARLY SITE REVIEW; HEARING

ADJUDICATORY BOARDS: STANDARD OF REVIEW

ADJUDICATORY HEARINGS: STANDARD OF REVIEW

ADJUDICATORY PROCEEDINGS: STANDARD OF REVIEW

LICENSING BOARD(S): RESPONSIBILITIES

NEPA: STANDARD FOR REVIEW

The Commission directs its boards to follow the approach spelled out in the D.C. Circuit's seminal *Calvert Cliffs* decision. There, the court indicated that while NEPA demands independent environmental judgments by NRC licensing boards — as the body with responsibility for authorizing issuance of construction permits — the boards need not rethink or redo every aspect of the NRC Staff's environmental findings or undertake their own fact-finding activities.

MANDATORY HEARINGS

NEPA: BASELINE ISSUES; EARLY SITE REVIEW; HEARING; STANDARD FOR REVIEW

RULES OF PRACTICE: BOARD (STANDARD OF REVIEW); UNCONTESTED ISSUES

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.104(b)(3), 10 C.F.R. § 51.105(a)(1)-(3))

ADJUDICATORY BOARDS: STANDARD OF REVIEW

ADJUDICATORY HEARINGS: STANDARD OF REVIEW

ADJUDICATORY PROCEEDINGS: STANDARD OF REVIEW

LICENSING BOARD(S): RESPONSIBILITIES

Under *Calvert Cliffs* and under NRC regulations, licensing boards must reach their own independent determination on uncontested NEPA ''baseline'' questions — i.e., whether the NEPA process ''has been complied with,'' what is the appro-

priate ''final balance among conflicting factors,'' and whether the ''construction permit should be issued, denied or appropriately conditioned.'' *See* 10 C.F.R. § 2.104(b)(3);10 C.F.R. § 51.105(a)(1)-(3). But in reaching those independent judgments, boards should not second-guess underlying technical or factual findings by the NRC Staff. The only exceptions to this would be if the reviewing board found the Staff review to be incomplete or the Staff findings to be insufficiently explained in the record. ''What *Calvert Cliffs* requires is an 'independent review of staff proposals' by the Board, and conclusions independently arrived at *on the basis of evidence in the record,* including the staff's Final Environmental Impact Statement.'' *Consumers Power Co.* (Midland Plant, Units 1 and 2), ALAB-123, 6 AEC 331, 335-36 (1973) (emphasis added). A licensing board's NEPA review must not be so intrusive or detailed as to involve the board in ''independent basic research'' or a ''duplicat[ion of] the analysis previously performed by the staff.'' *Id.* at 335.

RULEMAKING

NOTICE OF OPPORTUNITY FOR HEARING

RULES OF PRACTICE: NOTICE OF OPPORTUNITY FOR HEARING

REGULATIONS: INTERPRETATION (10 C.F.R. § 51.105(a)(3))

LICENSING BOARD(S): RESPONSIBILITIES

NEPA: STANDARD FOR REVIEW; COST-BENEFIT ANALYSIS (BALANCING)

Section 51.105(a)(3) of 10 C.F.R. *requires* boards to weigh benefits against costs, and could not be altered absent a notice-and-comment rulemaking. *See* 5 U.S.C. § 553; *see also, e.g., Shell Offshore Inc. v. Babbitt,* 238 F.3d 622, 629-30 (5th Cir. 2001); *Appalachian Power Co. v. EPA,* 208 F.3d 1015, 1028 (D.C. Cir. 2000). *But cf. National Whistleblower Center v. NRC,* 208 F.3d 256, 258 (D.C. Cir. 2000) (NRC may issue case-specific order overriding procedural regulation). The hearing notices' failure to refer specifically to the weighing requirement is inconsequential.

MANDATORY HEARINGS

NEPA: COST-BENEFIT ANALYSIS (BALANCING, URANIUM ENRICHMENT FACILITY); EARLY SITE REVIEW; HEARING

REGULATIONS: INTERPRETATION (10 C.F.R. § 51.105(a)(3))

LICENSING BOARD(S): RESPONSIBILITIES

NEPA: STANDARD FOR REVIEW

In uranium enrichment facility construction permit proceedings such as *LES* and *USEC,* a board's duty to conduct, at *this* stage of the proceedings, the ''weighing'' specified in section 51.105(a)(3) is beyond question. As the Commission stated in an earlier *LES* proceeding, involving the proposed Claiborne Enrichment Center, ''NEPA is generally regarded as calling for some sort of a weighing of the environmental costs against the economic, technical, or other public benefits of a proposal.'' *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 88 (1998). The Commission went on to point out that agency regulations ''direct the Staff to consider and weigh the environmental, technical, and other costs and benefits of a proposed action and alternatives.'' *Id.* at 89.

MANDATORY HEARINGS

NEPA: COST-BENEFIT ANALYSIS (BALANCING, URANIUM ENRICHMENT FACILITY); EARLY SITE REVIEW; HEARING; STANDARD FOR REVIEW

Although the earlier *LES* proceeding was governed by a Notice of Hearing that lacked the same ''weighing'' language that is absent from the current *LES* notice of hearing, the Board nonetheless conducted a weighing and balancing. CLI-98-3, 47 NRC at 84-86, *aff'g in part and rev'g in part* LBP-96-25, 44 NRC 331, 336-75 (1996). And although the Commission did not fully agree with the Board's NEPA balancing analysis on the merits, the Commission did not question the Board's threshold decision to ''weigh'' and ''balance'' the facility's advantages and disadvantages in the first place.

MANDATORY HEARINGS

NEPA: COST-BENEFIT ANALYSIS (BALANCING); EARLY SITE REVIEW; HEARING

EARLY SITE PERMITS

REGULATIONS: INTERPRETATION (10 C.F.R. § 52.21)

LICENSING BOARD(S): RESPONSIBILITIES

NEPA: STANDARD FOR REVIEW

By contrast, the Licensing Boards in the three currently pending Early Site Permit (ESP) cases cannot perform cost-benefit ''weighing'' — because an ESP is only a ''partial'' construction permit and 10 C.F.R. § 52.21 explicitly exempts both the NRC Staff and the applicant from assessing the ESP's benefits. *See also* 10 C.F.R. §§ 52.17(a)(2), 52.18; Final Rule: ''Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Reactors,'' 54 Fed. Reg. 15,372 (Apr. 18, 1989). Because the environmental report will lack such an assessment, neither the NRC Staff nor the Licensing Boards can conduct the ''weighing'' in its EIS ordinarily required under NEPA. This does not equate to evading the NEPA cost-benefit analysis, but merely postpones the analysis until the next (combined operating license) phase of licensing. *See* 10 C.F.R. §§ 51.97, 52.79(a)(1), 52.89. *See generally Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-9, 55 NRC 245, 249 (2002). At that time, the NRC Staff and ESP applicants will have much more cost-benefit information to provide reviewing licensing boards. Postponing the NEPA cost-benefit balancing simply reflects the limited scope of an ESP proceeding, as compared with that of a full construction permit case (addressing both site and plant design) or a combined license proceeding (such as *LES* and *USEC*).

MANDATORY HEARINGS

NEPA: CONSIDERATION OF ALTERNATIVES; EARLY SITE REVIEW; AGENCY RESPONSIBILITIES; HEARING

EARLY SITE PERMITS

REGULATIONS: INTERPRETATION (10 C.F.R. § 52.17(a)(2), 10 C.F.R. § 52.18)

LICENSING BOARD(S): RESPONSIBILITIES

NEPA: STANDARD FOR REVIEW

Both the Commission's regulations and NEPA itself require the NRC to consider alternatives before deciding whether to take major federal actions sig-

nificantly affecting the environment. But, as with the cost-benefit issue discussed above, the ''reasonable alternatives'' issue does not apply with full force to Early Site Permit (or ''partial'' construction permit) cases. At the ESP stage of the construction permit process, the boards' ''reasonable alternatives'' responsibilities are limited because the proceeding is focused on an appropriate *site,* not the actual construction of a reactor. Thus, boards must merely weigh and compare alternative sites, not other types of alternatives (such as alternative energy sources). *See* 10 C.F.R. §§ 52.17(a)(2), 52.18. By contrast, the requirement for consideration of ''reasonable alternatives'' has a broader scope in construction permit proceedings for uranium enrichment facilities. Because the scope of these latter proceedings is not limited to mere site selection, the quoted phrase — ''after consideration of reasonable alternatives'' — as applied in those proceedings is not limited to a consideration of alternative sites.

MANDATORY HEARINGS

NEPA: CONSIDERATION OF ALTERNATIVES; EARLY SITE REVIEW; HEARING

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.104(b), 10 C.F.R. § 51.105(a)(3))

LICENSING BOARD(S): RESPONSIBILITIES

NEPA: STANDARD FOR REVIEW

Even though section 2.104(b) contains no direct reference to considering reasonable alternatives, it still imposes that same requirement indirectly, by mandating that applications satisfy the standards of Part 51, Subpart A. 10 C.F.R. § 2.104(b)(3)(i). That subpart includes section 51.105(a)(3), which in turn requires licensing boards to ''consider reasonable alternatives.''

RULES OF PRACTICE: INTERVENORS (SCOPE OF PARTICIPATION)

MANDATORY HEARINGS: INTERVENORS (SCOPE OF PARTICIPATION)

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.1207, 10 C.F.R. § 2.1209)

INTERVENTION: SCOPE OF PARTICIPATION

The scope of the intervenors' participation in adjudications is limited to their admitted contentions, i.e., they are barred from participating in the uncontested

portion of the hearing. Any other result would contravene the objectives of the Commission's ''contention'' requirements. The NRC's 2004 revisions to the Subpart L procedural rules permit intervenors (and other parties) to submit written testimony *only* on admitted contentions (10 C.F.R. § 2.1207(a)(1)) and to submit proposed findings of fact and conclusions of law relevant *only* to those *contentions* that were addressed in the oral hearing. 10 C.F.R. § 2.1209. Similarly, the 1989 amendments to the Subpart G procedural rules limited both an intervenor's proposed findings and its appeals to *only* those *contentions* that the intervenor had itself placed in controversy. The Commission's purpose there was ''to ensure that the parties and adjudicatory tribunals focus their interests and adjudicatory resources on the contested issues as presented and argued by the party with the primary interest in, and concerns over the issues.'' Final Rule: ''Rules of Practice for Domestic Licensing Proceedings — Procedural Changes in the Hearing Process,'' 54 Fed. Reg. 33,168, 33,178 (Aug. 11, 1989). This same purpose likewise justifies the Commission's limiting the scope of intervenor participation in mandatory hearings.

MEMORANDUM AND ORDER

On March 18, 2005, the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel certified to us six questions concerning the NRC's statutory duty to conduct a ''mandatory hearing'' — i.e., a hearing that must take place even if no intervenor contests the license application.[1] The certified questions arise out of three pending proceedings (*North Anna, Clinton,* and *Grand Gulf*) for a nuclear power plant early site permit (''ESP'')[2] and one combined license proceeding to license a uranium enrichment facility (*LES*). USEC filed a motion for leave to submit its views on the certified questions, on the ground that it, too, seeks a license for a uranium enrichment facility. We granted review of the certified questions, gave USEC permission to file a brief, and set a briefing schedule.[3] After reviewing the records below and the parties' briefs, we answer the certified questions and, in so doing, provide guidance on how our licensing boards should conduct mandatory hearings.

[1] LBP-05-7, 61 NRC 188 (2005).

[2] ESPs are partial construction permits. *See* 10 C.F.R. § 52.21.

[3] CLI-05-9, 61 NRC 235 (2005).

I. STATUTORY AND REGULATORY BACKGROUND

The mandatory hearing requirement stems from section 189a of the Atomic Energy Act (''AEA''), which provides that ''[t]he Commission *shall* hold a hearing . . . on each application under section 103 or 104b for a construction permit for a [utilization or production] facility.''[4] In addition, section 193(b)(1) of the AEA specifically provides that ''[t]he Commission *shall* conduct a single adjudicatory hearing with regard to the licensing of construction and operation of a uranium enrichment facility under sections 53 and 63.''[5]

The Atomic Energy Acts of 1946 and 1954 contained no mandatory hearing requirement.[6] That idea originated with Senator Clinton B. Anderson in 1956.[7] The original version of the statutory ''mandatory hearing'' requirement appeared the following year in section 7 of the Price-Anderson Act, was applicable to *all* Atomic Energy Commission (''AEC'') licensing applications,[8] and remained in effect from 1957 until 1962. At the time Congress passed the Price-Anderson Act in 1957, the AEC was issuing construction permits without prior notice to the public and generally without a public hearing.[9] Moreover, the AEC was basing its construction permit decisions on reactor safety evaluations that were likewise unavailable to the public.[10]

These practices raised significant issues of public and congressional confidence in the agency, the need for separation of prosecutorial and quasi-judicial functions, and the need for a quasi-judicial body independent of the portion of the AEC that

---

[4] 42 U.S.C. § 2239(a) (emphasis added).

[5] 42 U.S.C. § 2243(b)(1) (emphasis added).

[6] S. Rep. No. 85-296 (1957), *reprinted in* 1957 U.S.C.C.A.N. 1803, 1826, *available at* 1957 WL 5103, Leg. Hist. (no requirement for hearing ''on all applications, but merely on those applications for which a hearing is requested by any interested party''); H.R. Rep. No. 85-435, at 25 (1957) (to accompany H.R. 7383) (same).

[7] William H. Berman and Lee M. Hydeman, ''The Atomic Energy Commission and Regulating Nuclear Facilities'' (Ann Arbor, MI, April 1961) (''Univ. of Michigan Study''), *extracts republished in* Staff of the Joint Committee, Improving the AEC Regulatory Process, Vol. II, Appendix 6, at 448 & n.43 (Joint Comm. Print 1961) (hereinafter ''1961 Joint Committee Print'').

[8] Pub. L. No. 85-256, § 7, 71 Stat. 576, 579 (Sept. 2, 1957). *See also* H.R. Rep. No. 85-435, at 29-30; Univ. of Michigan Study at 449.

[9] Part 2 — Rules of Practice, 21 Fed. Reg. 804, 805 (Feb. 4, 1956), promulgating 10 C.F.R. § 2.102(a); Univ. of Michigan Study at 447. Prior to April 1957, the AEC had granted only one request for hearing. *See* Staff of the Joint Committee on Atomic Energy (''Joint Committee''), A Study of AEC Procedures and Organization in the Licensing of Reactor Facilities 19 & n.10, 128-31 (Joint Comm. Print 1957) (''Joint Committee Study''); *Power Reactor Development Co.,* 1 AEC 1 (1956).

[10] *See* Joint Committee Study at 9; Univ. of Michigan Study at 447.

itself operated or promoted reactors.[11] Senator Anderson, the Vice-Chairman of the Joint Committee on Atomic Energy, explained that the mandatory hearing requirement was intended to address open-government and public-confidence issues[12] associated with the Commission's treatment of applications for power reactor construction permits.[13] When Congress next considered the mandatory hearing requirement in 1962, it amended section 189a to confine the requirement to construction permit applications only.[14] This contraction of the mandatory hearing requirement resulted from Congress's belief that separate hearings at both the construction permit and operating license stages constituted ''overjudicialization'' of the licensing process.[15] That's where the mandatory hearing requirement stands today.

Various NRC regulations implement the mandatory hearing requirement. For ESPs, the governing provision is 10 C.F.R. § 52.21.[16] For uranium enrichment facilities, the governing provisions are 10 C.F.R. § 70.23a and 10 C.F.R. § 70.31(e).[17] The Commission also has promulgated a procedural rule — 10 C.F.R. § 2.104(b)

---

[11] *See* Univ. of Michigan Study at 447-48; *see also* Joint Committee Study at 9; *Radiation Safety and Regulation: Hearings Before the Joint Comm. on Atomic Energy,* 87th Cong. 382-83 (1961) (AEC Memorandum Concerning Mandatory Hearing Requirement Under Atomic Energy Act) (hereinafter ''1961 JCAE Hearings''). In 1961, the AEC's and the United States military's reactors ''represent[ed] the greater portion of this country's total reactor program.'' *Views and Comments on Improving the AEC Regulatory Process* (''Views and Comments''): *Hearings Before the Joint Comm. on Atomic Energy,* 87th Cong. 22 (1961) (reply from James H. Campbell, President, Consumers Power Co.).

[12] Joint Committee Study at 8 (regarding AEC's closed-door decisionmaking in construction permit proceedings), 73 (quoting Sen. Anderson during the 1954 floor debate on section 189 of the AEA: ''I wish to be sure that the Commission has to do its business out of doors, so to speak, where everyone can see it'').

[13] *See Union of Concerned Scientists v. AEC,* 499 F.2d 1069, 1075 (D.C. Cir. 1974).

[14] Pub. L. No. 87-615, § 2, 76 Stat. 409 (1962), *amending* 42 U.S.C. § 2239(a). *See also* Pub. L. No. 101-575, § 5(e), 104 Stat. 2835 (Nov. 15, 1990) (''single adjudicatory hearing'' for uranium enrichment facilities), *amending* AEA § 193, 42 U.S.C. § 2243(b)(1).

[15] Views and Comments at 12; *see also* Univ. of Michigan Study at 431; 1961 JAEC Hearings 373 (Prof. Kenneth Culp Davis). When Congress decided in 1962 to eliminate the mandatory hearing requirement for operating license applications, it based that decision in part on the conclusion that ''there would still be a mandatory hearing at the critical point in reactor licensing — the construction permit stage — where the suitability of the site is to be judged.'' *Union of Concerned Scientists,* 499 F.2d at 1076 (internal quotation marks omitted), citing S. Rep. No. 1677, 87th Cong. 7-8, *reprinted in* 1962 U.S.C.C.A.N. 2207, 2214 (Joint Committee). *Accord* H.R. Rep. No. 1966, at 6 (Joint Committee on Atomic Energy, 87th Cong. 2d Sess., July 5, 1962) (to accompany H.R. 12,336) at 8 (critical point of the process); 108 Cong. Rec. 14,727 (Aug. 7, 1962) (Sen. Pastore).

[16] *See* Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Reactors, 54 Fed. Reg. 15,372 (Apr. 18, 1989).

[17] *See* Changes to Adjudicatory Process, 69 Fed. Reg. 2182 (Jan. 14, 2004), *petition for review denied sub nom. Citizens Awareness Network v. United States,* 391 F.2d 338 (1st Cir. 2004); Final Rule: ''Uranium Enrichment Regulations,'' 57 Fed. Reg. 18,388 (Apr. 30, 1992).

— specifying the issues to be addressed in both contested and uncontested construction permit proceedings.[18] This regulation is lengthy and complex, but because it is critical to today's decision, it bears quoting *verbatim.*

For hearings on *contested* applications,[19] section 2.104(b)(1) requires the Licensing Board to ''consider'':

> (i) Whether in accordance with the provisions of § 50.35(a) of [10 C.F.R., regarding the issuance of construction permits for nuclear power reactors]:
>
> (*a*) The applicant has described the proposed design of the facility, including, but not limited to, the principal architectural and engineering criteria for the design, and has identified the major features or components incorporated therein for the protection of the health and safety of the public;
>
> (*b*) Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration will be supplied in the final safety analysis report;
>
> (*c*) Safety features or components, if any, which require research and development, have been described by the applicant and the applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components; and
>
> (*d*) On the basis of the foregoing, there is reasonable assurance that (*1*) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of the proposed facility; and (*2*) taking into consideration the site criteria contained in Part 100 of this chapter, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;
>
> (ii) Whether the applicant is technically qualified to design and construct the proposed facility;
>
> (iii) Whether the applicant is financially qualified to design and construct the proposed facility;
>
> (iv) Whether the issuance of a permit for the construction of the facility will be inimical to the common defense and security or to the health and safety of the public;
>
> (v) If the application is for a construction permit for a nuclear power reactor, a testing facility, a fuel reprocessing plant, or other facility whose construction or operation has been determined by the Commission to have a significant impact on the

---

[18] The *Clinton, North Anna,* and *LES* proceedings are contested. The *Grand Gulf* proceeding is not. The status of the *USEC* proceeding is currently unresolved. Although the Commission recently ruled in favor of two petitioners' standing in *USEC,* CLI-05-11, 61 NRC 309 (2005), the Board has yet to rule on the admissibility of their contentions.

[19] Under our regulations, an application is considered ''contested'' if ''(1) . . . there is a controversy between the staff of the Commission and the applicant . . . concerning the issuance of the license or any of the terms . . . thereof, or (2) . . . a petition for leave to intervene in opposition to an application . . . has been granted or is pending before the Commission.'' 10 C.F.R. § 2.4.

environment, whether, in accordance with the requirements of subpart A of part 51 of this chapter, the construction permit should be issued as proposed.[20]

The first four of these requirements stem from the AEA, while the fifth derives from the National Environmental Policy Act of 1969 (''NEPA'').[21]

For *uncontested* applications, section 2.104(b)(2) requires the Board to ''determine'':

> (i) Without conducting a de novo evaluation of the application, whether the application and the record of the proceeding contain sufficient information, and the review of the application by the Commission's staff has been adequate to support affirmative findings on (b)(1) (i) through (iii) specified in this section [10 C.F.R. § 2.104] and a negative finding on (b)(1)(iv) specified in this section proposed to be made and the issuance of the construction permit proposed by the Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, and
>
> (ii) If the application is for a construction permit for a nuclear power reactor, a testing facility, a fuel processing plant, a uranium enrichment facility, or other facility whose construction or operation has been determined by the Commission to have a significant impact on the environment, whether the review conducted by the Commission pursuant to [NEPA] has been adequate.[22]

The first of these requirements stems from the AEA, the second from NEPA.

And, finally, whether or not the application is contested, our regulations give the Board special responsibility for three ''baseline NEPA issues.''[23] The Board must:

> (1) Determine whether the requirements of section 102(2)(A), (C) and (E) of [NEPA][24] and the regulations in this subpart [10 C.F.R. Part 51, Subpart A] have been met;

---

[20] *See also* 10 C.F.R. § 51.105(a)(5). *See generally* Miscellaneous Amendments: ''Part 2 — Rules of Practice,'' 31 Fed. Reg. 12,774 (Sept. 30, 1966) (hereinafter ''Miscellaneous Amendments''); Final Rule: ''Restructuring of Facility License Application Review and Hearing Processes,'' 37 Fed. Reg. 15,127 (July 28, 1972).

[21] 42 U.S.C. § 4321.

[22] Regarding subsection (b)(2)(ii), *see also* 10 C.F.R. § 51.105(a)(4).

[23] *See* LBP-06-7, 61 NRC at 192, *citing* 10 C.F.R. § 2.104(b)(3) and 10 C.F.R. § 51.105(a)(1)-(3).

[24] These three cited subsections of NEPA's section 102 require federal agencies to (A) ''utilize a systematic, interdisciplinary approach'' in making decisions on major federal actions that could significantly affect the environment; (C) prepare regarding such actions an EIS that addresses impacts, alternatives, and other considerations; and (E) study and develop alternatives where there are ''unresolved conflicts concerning alternative uses of available resources.'' 42 U.S.C. § 4332(2)(A), (C), and (E).

(2) Independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken; and

(3) Determine, after weighing the environmental, economic, technical, and other benefits against environmental and other costs, and considering reasonable alternatives, whether the construction permit . . . should be issued, denied, or appropriately conditioned to protect environmental values.[25]

II. PROCEDURAL BACKGROUND

As the Chief Administrative Judge recognized, the NRC's various hearing notices in the ESP and uranium enrichment cases, read in conjunction with each other and with our regulations, created ''some uncertainty'' and ''seeming ambiguity.''[26] The Chief Administrative Judge pointed, for example, to unexplained differences between the ESP and uranium enrichment notices:

> in contrast to section 2.104(b)(2) and the *LES* notice that explicitly state uncontested proceedings are not to involve a de novo application review, there is no mention of such a review limitation in the ESP notices. . . . So too, in accord with section 2.104(b)(3)(iii), the ESP notices indicate that the NEPA review for either contested or uncontested cases is to include a determination of whether the ESP should be issued, denied, or appropriately conditioned to protect environmental values. These notices, however, [differ from the *LES* notice in that they] contain an additional clause not set forth in section 2.104(b)(3)(iii) directing that such a determination should be arrived at ''after considering reasonable alternatives.''[27]

To ''develop a unified approach,'' each of the ESP Boards, and the *LES* Board, asked the parties to recommend mandatory hearing procedures.[28] The

---

[25] 10 C.F.R. § 51.105(a)(1)-(3).

[26] LBP-05-7, 61 NRC at 193, 194. *See* Dominion Nuclear North Anna, 68 Fed. Reg. 67,489 (Dec. 2, 2003); Exelon, 68 Fed. Reg. 69,426 (Dec. 12, 2003); System Energy, 69 Fed. Reg. 2636 (Jan. 16, 2004); *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-3, 59 NRC 10 (2004); *USEC, Inc.* (American Centrifuge Plant), CLI-04-30, 60 NRC 426 (2004).

[27] LBP-05-7, 61 NRC at 193 (citations omitted).

[28] *Id.* at 194. *See System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), LBP-04-19, 60 NRC 277, 298 & n.7 (2004); *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 NRC 253, 274 n.10 (2004); *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), LBP-04-17, 60 NRC 229, 250 n.10 (2004); *Louisiana Energy Services, L.P.* (National Enrichment Facility), LBP-04-14, 60 NRC 40, 75 n.20 (2004).

parties suggested options of various kinds,[29] but the Chief Administrative Judge considered them incompatible in significant respects:

> The Applicant and the Staff have proposed in the *LES* hearing that the Board's conclusion can be based solely upon summary documents provided by the Applicant and the Staff, coupled with a hearing involving questions raised by the Board on those summaries. In stark contrast, the Applicants and the Staff in the *Clinton* and *Grand Gulf* ESP cases have suggested that such a conclusion must rest upon a thorough review of the application, the safety evaluation report (SER) and final environmental impact statement (FEIS), and the ACRS recommendations, followed by a hearing on questions from the Board. For the *North Anna* ESP proceeding, however, the Applicant and the Staff have suggested an approach that appears to . . . fall somewhat between these two, noting that the Board ''does not make the findings itself but rather determines whether the application and the record contain sufficient information, and the review of the application by the Staff has been adequate to support the Staff's proposed findings.''[30]

Hence, after consulting the several licensing boards assigned to these cases, and in an effort to save judicial resources, the Chief Administrative Judge certified the following six questions to the Commission:[31]

> (1) Should a proceeding as a whole be considered as ''contested'' or ''uncontested,'' or should those two categorizations instead be applied to portions of a proceeding, depending on whether or not they encompass matters that were the subject of admitted contentions?

---

[29] *See* Joint Status Report Regarding the Parties' Proposed Discovery Plan and Other Adjudicatory Process Issues, dated July 29, 2004 (''LES Joint Status Report''); Joint Memorandum on the Mandatory Hearing Process, dated Oct. 8, 2004 (''North Anna Joint Memorandum''); Intervenors' Memorandum on the Mandatory Hearing Process, dated Oct. 8, 2004 (''Intervenors' *North Anna* Memorandum''); Joint Response of Exelon Generation Company and the NRC Staff to Licensing Board Request Regarding Mandatory Hearing Procedures for the Clinton Early Site Permit, dated Sept. 17, 2004 (''Clinton Joint Response''); Joint Filing of System Energy Resources, Inc. and the Nuclear Regulatory Commission Staff Regarding Mandatory Hearing, dated Sept. 7, 2004 (''Grand Gulf Joint Filing'').

[30] LBP-05-7, 61 NRC at 194. *See also id.* at 194-95 n.8.

[31] *Id.* at 194-99. We have reordered and slightly rephrased the certified questions.

(2) What is the boards' scope of the responsibility with respect to their findings concerning the two ESP AEA safety issues[32] and the NEPA issue?[33]

(3) In uncontested ESP proceedings, should the licensing boards' determinations regarding

(a) the sufficiency of the information in the application and record of the proceeding and the adequacy of the staff's review of the application to support a negative finding on Safety Issue 1 and an affirmative finding on Safety Issue 2, and

(b) the adequacy of the review conducted by the Commission pursuant to NEPA and subpart A of 10 C.F.R. Part 51

be made by conducting a *de novo* evaluation of the applications at issue?

(4) What is the appropriate scope of review for Licensing Boards in making findings on the three ''baseline'' NEPA issues, as required by 10 C.F.R. § 51.105(a)(1)-(3)?

(5) Was the ESP and *LES* notices' omission of any reference to section 51.105(a)(3)'s cost-benefit balancing requirement[34] intended to narrow further the scope of review required to be undertaken by the Licensing Boards in these mandatory hearings?

(6) Similarly, was omitting section 51.105(a)(3)'s ''after considering reasonable alternatives'' clause from the *LES* notice intended to create a distinction between the responsibilities of the *LES* and the ESP Licensing Boards with regard to their findings on NEPA baseline Issue 3?

---

[32] AEA Safety Issue 1 is ''whether the issuance of an early site permit will be inimical to the common defense and security or to the health and safety of the public.'' *See* 10 C.F.R. § 2.104(b)(1)(iv). AEA Safety Issue 2 is ''whether, taking into consideration the site criteria contained in 10 CFR part 100, a reactor, or reactors, having characteristics that fall within the parameters for the site can be constructed and operated without undue risk to the health and safety of the public.'' *See* 10 C.F.R. § 2.104(b)(1)(i)(*d*)(*2*).

[33] The overriding NEPA issue is ''whether, in accordance with the requirements of subpart A of 10 CFR part 51, the early site permit should be issued as proposed.'' *See* LBP-04-7, 61 NRC at 197.

[34] The language at issue is highlighted in bold below:

> [The presiding officer will . . . [d]etermine, **after weighing the environmental, economic, technical, and other benefits against environmental and other costs,** and considering reasonable alternatives, whether the construction permit or license to manufacture should be issued, denied, or appropriately conditioned to protect environmental values.

Section 2.104(b)(3)(ii) contains a similar balancing requirement: ''the presiding officer will . . . [i]ndependently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken.''

III. DISCUSSION

In recent decades the Commission has faced few proceedings where the mandatory hearing requirement was applicable.[35] Hence, the time is ripe for us to set out our understanding of the mandatory hearing process. The certified questions raise a number of intricate problems, which we will address below, point-by-point. Overall, we expect licensing boards conducting mandatory hearings on uncontested issues to take an independent ''hard look'' at NRC Staff safety and environmental findings, but not to replicate NRC Staff work. Giving appropriate deference to NRC Staff technical expertise, boards are to probe the logic and evidence supporting NRC Staff findings and decide whether those findings are sufficient to support license issuance. With that general approach in mind, we turn now to the specific certified questions.

A. Treatment of Entire or Only Portions of Proceeding as Contested or Uncontested

Our regulations assign a different review function to licensing boards depending on whether a case is ''contested'' or ''uncontested,'' with the former requiring ''the more intense scrutiny afforded by the adversarial process.''[36] The Chief Administrative Judge certified to us the question whether the ''contested'' or ''uncontested'' designations apply to the proceeding as a whole or instead to each issue of each proceeding.[37] Our key regulations, 10 C.F.R. § 2.104(b) and 10 C.F.R. § 51.105(a)(4) & (5), refer simply to contested or uncontested ''proceedings,'' not to issues. But some parties in the ESP cases urged their boards to bifurcate contested proceedings into contested or uncontested ''portions.''[38] Based on our review of the intent of our regulations and prior NRC cases, we conclude that the contested and uncontested designations apply issue-by-issue, and not to proceedings-at-large.

Historically, when faced with the ''contested'' versus ''uncontested'' question, our licensing boards have repeatedly distinguished between the contested and

---

[35] *But see Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294 (1997), CLI-98-3, 47 NRC 77 (1998), and CLI-98-5, 47 NRC 113 (1998); *All Chemical Isotope Enrichment, Inc.* (AlChemIE Facility-1 CPDF; Facility-2, Oliver Springs), LBP-89-5, 29 NRC 99, *aff'd,* ALAB-913, 29 NRC 267 (1989), *revocation of license sustained,* LBP-90-26, 32 NRC 30 (1990); *United States Department of Energy* (Clinch River Breeder Reactor Plant), LBP-85-7, 21 NRC 507 (1985).

[36] *Louisiana Power and Light Co.* (Waterford Steam Electric Station, Unit 3), ALAB-732, 17 NRC 1076, 1112 (1983).

[37] LBP-05-7, 61 NRC at 196.

[38] *See Clinton* Joint Response at 10; *North Anna* Joint Memorandum at 5-8.

uncontested ''*portion*'' of proceedings.[39] That distinction dates back to at least 1966, when in a policy statement the AEC made clear the issue-by-issue nature of boards' ''mandatory'' decisionmaking duties:

> In considering those [mandatory AEA] *issues,* . . . the board will, as to *matters* not in controversy, be neither required nor expected to duplicate the review already performed by the Commission's regulatory staff and the ACRS; the Board is authorized to rely upon the uncontroverted testimony of the regulatory staff and the applicant and the uncontroverted conclusions of the ACRS.[40]

Our longstanding practice of treating contested and uncontested issues differently is grounded in sound policy. First, it leaves to the expert NRC technical staff prime responsibility for technical fact-finding on uncontested matters. Second, it promotes efficient case management and prompt decisionmaking by concentrating our boards' attention on resolving disputes rather than redoing NRC Staff work. We emphasized in the *LES* hearing notice the importance we attach to resolving licensing adjudications promptly. We specifically stated that we would seek to ''avoid unnecessary delays'' and ''endeavor to identify efficiencies . . . to further reduce the time the agency needs to complete reviews and reach decisions'' in such proceedings.[41] We instructed the Board to ''expeditiously decide legal and policy issues'' and also to follow the guidance in our *Statement of Policy on Conduct of Adjudicatory Proceedings*[42] — which was intended, among other things, to expedite the completion of adjudications without sacrificing fairness.[43]

The use of a deferential review standard for uncontested issues supports these policies of promptness and efficiency. If only a portion of a proceeding's issues

---

[39] *See, e.g., United States Department of Energy* (Clinch River Breeder Reactor Plant), LBP-83-8, 17 NRC 158 (1983), *vacated on other grounds,* ALAB-755, 18 NRC 1337 (1983); *Duquesne Light Co.* (Perry Nuclear Power Plant, Units 1 and 2), LBP-77-29, 5 NRC 1121 (1977). Most recently, the Licensing Board in *Grand Gulf* drew this same distinction. *System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), LBP-04-19, 60 NRC 277, 282 (2004).

[40] ''Statement of General Policy: Conduct of Proceedings for the Issuance of Construction Permits for Production and Utilization Facilities for Which a Hearing Is Required Under Section 189a, of the Atomic Energy Act of 1954, as amended,'' attached as Appendix A to 10 C.F.R. Part 2, *promulgated in* Miscellaneous Amendments, 31 Fed. Reg. at 12,780 (section VI(b)) (emphasis added). *Accord id.* (section VI(d)). Although Appendix A was recently rescinded (Final Rule: ''Changes to Adjudicatory Process,'' 69 Fed. Reg. 2182, 2274 (Jan. 14, 2004)), it has not been replaced with conflicting guidance. Therefore, we rely on Appendix A as an authoritative expression of the 1966 Commission's interpretation of section 2.104(b), and also as support for our own current interpretation of that regulation.

[41] *LES,* CLI-04-3, 59 NRC at 16.

[42] CLI-98-12, 48 NRC 18 (1998).

[43] *LES,* CLI-04-3, 59 NRC at 17. *See also Statement of Policy on Conduct of Licensing Proceedings,* CLI-81-8, 13 NRC 452, 453 (1981).

are in dispute, it makes no sense for a licensing board to proceed as if the entire adjudication is contested, with consequently greater demands on the parties' and the board's time and resources. As the Commission's Appeal Board concluded when examining this issue many years ago, ''the only reasonable interpretation'' distinguishes ''between *issues* in contest and *matters* which have not been placed in controversy.''[44] As we explain further below, with respect to contested issues,[45] the Board ''must resolve the controversy'' itself, as a *de novo* matter.[46] But with respect to uncontested matters, the Board must merely ''decide whether the *staff's* review has been adequate to support [its] findings.''[47]

B. Scope of Boards' Responsibility — ''Consider'' Versus ''Determine''

The Chief Administrative Judge expresses concern that our regulations (and ESP hearing notices) call on licensing boards to ''determine'' certain questions in uncontested cases but merely to ''consider'' them in contested cases.[48] He wonders ''as a practical matter . . . what, if any, distinction was intended to exist'' between ''consider'' and ''determine,''[49] and whether the different terms ''portend'' a difference in licensing boards' ''responsibility'' in contested and uncontested cases.[50] As we have already suggested, and as we elaborate later in today's decision, as a general matter licensing boards *should* review contested and uncontested issues differently, giving the NRC Staff considerably more deference on uncontested issues. But in reaching that conclusion we don't rest on any distinction between the terms ''consider'' and ''determine,'' which in the current context we see as essentially synonymous.

The present cases are not the first instances of confusion regarding our regulations' use of the terms ''determine'' and ''consider.'' For example, during the late 1960s, licensing boards indicated three times (without comment) that the AEC's hearing notices in uncontested proceedings had instructed the boards

---

[44] *Gulf States Utilities Co.* (River Bend Station, Units 1 and 2), ALAB-444, 6 NRC 760, 774 n.26 (1977) (emphases in original). *See also Union of Concerned Scientists,* 499 F.2d at 1077; 10 C.F.R. Part 2, former Appendix A, § V(f)(1) (2004).

[45] ''Contested issues'' are those regarding which a board will issue a merits determination, either through an initial decision or a summary disposition order.

[46] *River Bend Station,* ALAB-444, 6 NRC at 774 n.26.

[47] *Id.* (emphasis added).

[48] LBP-05-7, 61 NRC at 195-96, *citing* 10 C.F.R. § 2.104(b)(1) (''consider'' issues in contested proceeding) and 10 C.F.R. § 2.104(b)(2) (''determine'' issues in uncontested proceeding).

[49] LBP-05-7, 61 NRC at 195-96.

[50] *Id.* at 196.

to ''consider'' (rather than the regulation's word ''determine'') issues.[51] (More on AEC hearing notices shortly.) The confusion emanates from a 1966 AEC rulemaking promulgating the original version of section 2.104(b). That version was quite similar to today's, and included the same ''determine''–''consider'' dichotomy that prompted the Chief Administrative Judge's certified question. But the regulatory history of the 1966 rulemaking (and subsequent rulemakings), together with hearing notices the AEC issued under section 2.104(b), convince us that the AEC was using the words ''determine'' and ''consider'' synonymously.

The 1966 version of section 2.104(b)(1) required (just as that section now requires) boards to ''consider'' a particular set of AEA issues in contested proceedings.[52] Yet that same rulemaking included a Commission Policy Statement that essentially equated the terms ''consider'' and ''determine.'' The 1966 Policy Statement specified that the board ''will *determine*'' the correct response to questions at issue in contested proceedings,[53] and likewise stated that, ''[i]n contested proceedings, the board will . . . *decide* whether the findings required by the Act and the Commission's regulations [i.e., the mandatory AEA issues] should be made.''[54] The Policy Statement's use of the words ''decide'' and ''determine'' as substitutes for section 2.104(b)(1)'s word ''consider'' strongly suggests that the 1966 Commission considered the three words interchangeable. The AEC's Statement of Considerations for the 1966 rulemaking offers similar support for this conclusion — indicating that boards were to ''determine'' the correct answers to questions in uncontested cases and ''decide'' issues in contested ones.[55]

When the AEC amended its 1966 Policy Statement in 1972, it used the word ''determine'' when describing the licensing boards' responsibility in *both* contested *and* uncontested construction permit proceedings[56] — thus indicating that the AEC continued to view the terms ''determine'' and ''consider'' as synonymous. This AEC practice continued unabated over the years, as is reflected in many AEC hearing notices.[57]

---

[51] *Tennessee Valley Authority,* 4 AEC 136 (1968); *Wisconsin Michigan Power Co.* (Point Beach Nuclear Plant, Unit 1), 4 AEC 3, 3-4 (1967); *Tennessee Valley Authority* (Browns Ferry, Units 1 and 2), 3 AEC 209, 209-10 (1967).

[52] Miscellaneous Amendments, 31 Fed. Reg. at 12,776.

[53] *Id.* at 12,780 (emphasis added).

[54] *Id.* (emphasis added).

[55] *Id.* at 12,775.

[56] Final Rule: ''Restructuring of Facility License Application Review and Hearing Processes,'' 37 Fed. Reg. 15,127, 15,141-42 (July 28, 1972), Policy Statement § VI(c)(1).

[57] In 1971 the AEC amended its mandatory hearing rules to comply with *Calvert Cliffs' Coordinating Committee v. AEC,* 449 F.2d 1109 (D.C. Cir. 1971). *Calvert Cliffs* had struck down an AEC rule eliminating NEPA reviews from the licensing boards' mandatory hearings. There are many examples

(Continued)

Our bottom line is that nothing of importance turns on the difference between the terms ''determine'' and ''consider.'' Obviously, the *raison d'etre* of our licensing boards is to decide issues, whether contested or uncontested. So even when our regulations merely direct boards to ''consider'' questions, we anticipate that boards will go on to *decide* them as well. We remind the boards, however, that their review of a contested issue is quite different from their review of an uncontested one, and that this difference is reflected, to a considerable extent, in the *depth* of the boards' review (i.e., *de novo* or not) — an issue to which we now turn.

C. Scope of Board Review — ''*De Novo*'' or ''Sufficiency''

The Chief Administrative Judge points to a difference in the language of the hearing notices for the *LES* and the ESP cases as to whether the Board should conduct a *de novo* review of the applications. The *LES* notice (and, we observe, also the *USEC* notice) states that the Board will not conduct a *de novo* review when making determinations about uncontested AEA safety matters and all nonbaseline NEPA issues.[58] By contrast, all three ESP notices omit the phrase ''without conducting a *de novo* review.'' Omitting this language from the ESP hearing notices could be read to imply that the ESP boards are authorized to conduct a *de novo* review and then base their safety and environmental determinations on the results of that review. Accordingly, the Chief Administrative Judge certifies the question whether in uncontested cases the boards should conduct a *de novo* review regarding (a) the sufficiency of the information in the application and record of the proceeding and the adequacy of the NRC Staff's AEA review of

---

prior to the 1971 Part 2 amendments where the Commission used ''determine,'' ''consider,'' and ''decide'' interchangeably. *See* 31 Fed. Reg. at 15,611 & 16,286; 32 Fed. Reg. at 827, 1003, 3235, 4549, 6305, 7503, 10,996, 13,735, & 15,404; 33 Fed. Reg. at 516, 1083, 4117, 5175, 5636, 6490, 7046-47, 7702, 7730, 8235, 8358, 10,121, 11,100, 11,422, 14,243, & 20,058; 34 Fed. Reg. at 1741, 6051, 12,804, 13,709, 17,409, & 18,440; 35 Fed. Reg. at 3247, 3693, 3837, 4664, 5639, 6675, 12,680, 14,170, 16,289, 16,385, 16,750, & 17,000; 36 Fed. Reg. at 5746, 12,323, 13,699, 23,087, & 23,267. The AEC continued to use similar terminology after 1971. *See* 37 Fed. Reg. at 4732; 36 Fed. Reg. at 23,168-69, 23,170, & 25,244; *see also* 37 Fed. Reg. at 7358, 14,249, 16,118, & 16,561.

[58] Both of these notices take their language regarding *de novo* review almost *verbatim* from the NRC's earlier notice of hearing for LES's proposed Claiborne Enrichment Center. *See* Notice of Receipt of Application for License[;] Notice of Availability of Applicant's Environmental Report; Notice of Consideration of Issuance of License; and Notice of Hearing and Commission Order; Louisiana Energy Services, L.P., Claiborne Enrichment Center,'' 56 Fed. Reg. 23,310 (May 21, 1991); *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 84 (1998).

the application to support AEA safety findings, and (b) the adequacy of the NRC Staff's NEPA review.[59]

We hold that the boards should conduct a simple ''sufficiency'' review of uncontested issues, not a *de novo* review. Only when resolving contentions litigated through the adversary process must the boards bring their own ''*de novo*'' judgment to bear. In such cases, boards must decide, based on governing regulatory standards and the evidence submitted, whether the applicant has met its burden of proof (except where the NRC Staff has the burden).[60] But when considering safety and environmental matters not subject to the adversarial process — so-called ''uncontested'' issues — the boards should decide simply whether the safety and environmental record is ''sufficient'' to support license issuance. In other words, the boards should inquire whether the NRC Staff performed an adequate review and made findings with reasonable support in logic and fact.[61] ''An analogy is to the function of an appellate court, applying the 'substantial evidence' test, although it is imperfect because the ASLB looks not only to the information in the record, but also to the thoroughness of the review that the Staff . . . has given it.''[62]

It is true that our hearing notices in the present cases, and our regulations themselves, arguably introduce confusion in this area. As the Chief Administrative Judge pointed out, while our uranium enrichment hearing notices expressly prohibit *de novo* board review of uncontested matters, our ESP notices say nothing at all about it.[63] Similarly, our regulations expressly prohibit *de novo* board review of uncontested AEA issues, but do not apply the bar to NEPA issues.[64] But nothing in our regulations or hearing notices *directs* boards to engage in *de novo* review of uncontested AEA *or* NEPA issues. Today we decide as a general matter that *de novo* review of uncontested issues is prohibited, whether the issues arise under the AEA or NEPA. Our decision today rejecting *de novo* review overrides any ambiguity or uncertainty deriving from our regulations or notices.

We add a *caveat.* In the next part of today's decision (Part D), we hold that certain so-called ''baseline'' NEPA conclusions require independent licensing board judgments that some might consider tantamount to *de novo* review. Even there, however, as we shall explain, the NRC Staff's underlying technical and

---

[59] LBP-05-7, 61 NRC at 197 & n.11.

[60] *See* 10 C.F.R. § 2.325.

[61] *See, e.g., AlChemIE Facility,* ALAB-913, 29 NRC at 268.

[62] *Union of Concerned Scientists,* 499 F.2d at 1076.

[63] LBP-05-7, 61 NRC at 196-97.

[64] *See* 10 C.F.R. § 2.104(b)(2). Only subsection (i) of 10 C.F.R. § 2.104(b)(2) contains the *de novo* prohibition. Subsection (ii) does not. Subsection (i) addresses AEA safety issues, whereas subsection (ii) deals with NEPA issues.

factual findings are not open to board reconsideration unless, after a review of the record, the board finds the NRC Staff review inadequate or its findings insufficient.

This is not to say that we expect our licensing boards to follow a cursory, hands-off approach to uncontested NRC Staff findings. On the contrary, as we outline below, we anticipate that our boards will carefully probe those findings by asking appropriate questions and by requiring supplemental information when necessary, and thereby undertake the kind of ''truly independent review''[65] that Congress anticipated when it established the mandatory hearing requirement.

From the start it was understood that a ''truly independent review'' at mandatory hearings meant that licensing boards were not to ''rubber stamp'' the findings of the NRC Staff.[66] The boards' role is ''to constitute a check on the understanding of the staff''[67] and ''to decide whether the staff's safety findings, on which so much depends, were the right ones.''[68] But ''truly independent review'' by licensing boards, in the interest of public safety, does not mean that multiple reviews of the same *uncontested* issues — first by the NRC Staff, then by the ACRS, and finally by a licensing board — would be necessary to serve this purpose.[69] Rather, full-scale (or *de novo*) board review of uncontested issues would in our view amount, as was feared in 1962 when Congress confined the mandatory hearing requirement to construction permit applications only, to ''overjudicializing'' the process.[70] It defies common sense for this agency to insist that both it and its applicants expend the same kind of ''*de novo*'' judicial effort for uncontested issues as for contested ones.

Moreover, applying a less stringent ''sufficiency'' standard when examining uncontested issues merely recognizes ''the inherent limitations on a board's review of a matter not in contest and therefore not subject to the more intense scrutiny afforded by the adversarial process.''[71] ''As a practical matter . . . it would simply not be possible for the two technical members of the panel to evaluate the totality of the material relevant to safety matters that the Staff and ACRS have generated through many months of work. This fact is so obvious that it borders

---

[65] *Calvert Cliffs,* 449 F.2d at 1118.

[66] David F. Cavers, *Administrative Decisionmaking in Nuclear Facilities Licensing,* 110 U. Pa. L. Rev. 330, 348 (1962) (''Cavers''). Professor Cavers was a consultant to the Joint Committee when its staff drafted the *Study.*

[67] 1961 JCAE Hearings 376 (Mr. Lee Hydeman).

[68] *Id.* at 369 (testimony of former AEC General Counsel William Mitchell).

[69] *See* 1961 JCAE Hearings 340 (former ACRS Chairman Theos J. Thompson), 343 (former ACRS Chairman Leslie Silverman); Views and Comments at 2, 11 (reply from ACRS and from Atomic Industrial Forum).

[70] Views and Comments at 12; *see also* Univ. of Michigan Study at 431; 1961 JAEC Hearings 373 (Prof. Kenneth Culp Davis).

[71] *Waterford,* ALAB-732, 17 NRC at 1112.

on the ludicrous to suggest that Congress intended the [licensing boards] to so function.''[72]

The Chief Administrative Judge recognized as much when in his certification decision he offered an ''estimate that a full review of an application, including the SER, FEIS, and ACRS recommendations, followed by hearings on issues raised by such a review will consume not less than 1000 person-hours (and, perhaps, double that for complicated applications).''[73] While we certainly expect our boards to undertake a reasonable review of NRC Staff findings on uncontested issues, we don't think the task need consume anything close to 1000 (or 2000) person-hours.

How, then, should our licensing boards approach their mandatory review function? During deliberations over the 1962 AEA amendments, AEC Commissioner Loren K. Olson offered the following apt description of the hearing examiner's (licensing board's) important but limited role:

> [T]he hearing examiner is supposed to make a decision based upon the record on the ultimate question of safety. He is not to contribute evidence from his own mind to that record. He is to take the evidence of the record and to try to conclude whether all evidence available, whatever it be, fact and opinion, is expressed on the record. He then proceeds to try to evaluate the record and to try to evaluate this question of risk as identified on the record, to ascertain whether that record supports a conclusion, a policy and technical judgment on the ultimate question of reasonable assurance of safety.[74]

This is not to say that the Commission believes the licensing boards must demand that *all possible views* and *facts* relating in any way to the matters in question

---

[72] *Union of Concerned Scientists,* 499 F.2d at 1077.

[73] LBP-05-7, 61 NRC at 199 n.15. In the brief it filed with us, Dominion offers some sense of the enormous amount of time involved in the NRC Staff's safety and environmental review that a board, if conducting a true *de novo* review, might have to duplicate:

> In the ESP proceedings, the NRC Staff is undertaking a two-year technical and environmental review. The NRC Staff's review is performed by numerous subject matter experts including support from the national laboratories. For example, forty-two experts . . . contributed to the Staff's environmental review of the North Anna ESP application. . . . Based on NRC Staff review fees, Dominion estimates that on the order of 7,500 person-hours was spent [to] produce the draft SER and 12,000 person-hours was spent preparing the DEIS in the North Anna ESP proceedings (and obviously, additional time will be required to finalize these documents and complete the NRC Staff's review). As part of the environmental review, the NRC Staff has consulted with federal and state agencies, has held public meetings to obtain comments on the scope of the review and later on the draft EIS, and has received and reviewed hundreds of written comments.

Dominion's May 18 Brief at 5.

[74] 1961 JAEC Hearings at 313. *See also* Cavers, 110 U. Pa. L. Rev. at 359-60.

must be placed in the evidentiary record. Rather, the licensing boards need only ensure that the evidentiary record contains evidence sufficient to allow them to make a decision on the ultimate question of safety.

Our past rulemakings and adjudications also give useful guidance on how licensing boards should proceed when examining uncontested issues. Boards are not to ''conduct a *de novo* evaluation of the application, [but] rather . . . test the adequacy of the staff's review.''[75] In doing so, boards have authority to ask clarifying questions of witnesses,[76] to order the record to be supplemented,[77] to reject the proposed action,[78] or even to deny the construction permit outright,[79] and to set conditions on the approval of the construction permit.[80]

As for the actual procedure to be followed at mandatory hearings, licensing boards have considerable flexibility. The AEA's mandatory hearing requirements in sections 189a and 193(b)(1) are phrased generally. ''[T]he Act itself nowhere prescribes the content of a hearing or prescribes the manner in which this 'hearing' is to be run.''[81] The word ''hearing'' can refer to any of a number of events,[82] including trial-type evidentiary hearings,[83] ''paper hearings,''[84] paper hearings

---

[75] Miscellaneous Amendments, 31 Fed. Reg. at 12,779.

[76] Letter from Commissioner L.K. Olson to Mr. James T. Ramey, Executive Director, Joint Committee, dated Nov. 30, 1960, *republished in* 1961 Joint Committee Print, Vol. II, Appendix 9, at 580; *see Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), ALAB-490, 8 NRC 234, 243 (1978), *aff'd,* CLI-79-5, 9 NRC 607, 608 (1979); *Boston Edison Co.* (Pilgrim Nuclear Power Station, Unit 2), LBP-74-63, 8 AEC 330, 352, *aff'd,* ALAB-238, 8 AEC 656 (1974).

[77] Miscellaneous Amendments, 31 Fed. Reg. at 12,779. *See also Union of Concerned Scientists,* 499 F.2d at 1077; *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-77-8, 5 NRC 503, 526 (1977), *aff'd sub nom. New England Coalition on Nuclear Pollution v. NRC,* 582 F.2d 87, 95 (1st Cir. 1978).

[78] *Calvert Cliffs,* 449 F.2d at 1118; *Consumers Power Co.* (Midland Plant, Units 1 and 2), ALAB-123, 6 AEC 331, 335 (1973); *Seabrook,* CLI-77-8, 5 NRC at 526.

[79] *Tennessee Valley Authority* (Hartsville Nuclear Plant, Units 1A, 2A, 1B, and 2B), LBP-76-44, 4 NRC 637, 645 (1976).

[80] *See, e.g., Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), LBP-78-4, 7 NRC 92, 144-46 (1978); *Perry,* LBP-77-29, 5 NRC at 1131-32; *Hartsville,* LBP-76-44, 4 NRC at 645.

[81] *Union of Concerned Scientists v. NRC,* 920 F.2d 50, 53 (D.C. Cir. 1990). *See also Sholly v. NRC,* 651 F.2d 780, 791 n.27 (D.C. Cir. 1980), *vacated on other grounds,* 459 U.S. 1194 (1983).

[82] *See* Kenneth Culp Davis, *Nuclear Facilities Licensing: Another View,* 110 U. Pa. L. Rev. 371, 380 (1962). *See generally* 10 C.F.R. Part 2, Subparts A-M.

[83] *See* 10 C.F.R. Part 2, Subpart G.

[84] *See* Final Rule: ''Streamlined Hearing Process for NRC Approval of License Transfers,'' 63 Fed. Reg. 66,721, 66,729 (Dec. 3, 1998). (''Subpart L provides for paper hearings unless oral presentations are ordered by the Presiding Officer'').

accompanied by oral arguments,[85] hearings employing a mixture of procedural rules,[86] and legislative hearings.[87] The AEA's hearing requirement does not demand a ''one size fits all'' approach.[88] Thus, we do not dictate any particular procedure in the current cases, but we would expect the boards to select the most appropriate and expeditious approach given the specific circumstances of a case.

D. Scope of Review for Three ''Baseline'' NEPA Issues

The Chief Administrative Judge raises questions about the following three ''baseline'' NEPA issues set forth in 10 C.F.R. § 2.104(b)(3) and 10 C.F.R. § 51.105(a)(1)-(3) and on which licensing boards must rule regardless of whether the proceeding is contested:

> (i) Determine whether the requirements of section 102(2)(A), (C) and (E) of the National Environmental Policy Act and Subpart A of Part 51 of this chapter have been complied with in the proceeding;[89]
>
> (ii) Independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken; and
>
> (iii) Determine whether the construction permit should be issued, denied, or appropriately conditioned to protect environmental values.

The Chief Administrative Judge questions whether licensing boards should take the NRC Staff's recommended approach of simply relying on ''the testimony

---

[85] *See, e.g., Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), CLI-01-11, 53 NRC 370, 383-86 (2001); *see also* 10 C.F.R. §§ 2.343, 2.1113.

[86] *See, e.g., Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-01-13, 53 NRC 478, 479 (2001). *See also* 10 C.F.R. § 2.1500 *et seq.*

[87] *See, e.g., Inquiry into Three Mile Island Unit 2 Leak Rate Data Falsification,* CLI-85-18, 22 NRC 877, 882 (1985). *See also Rulemaking Hearing: Acceptance Criteria for Emergency Core Cooling Systems for Light-Water-Cooled Nuclear Power Reactors,* CLI-73-9, 6 AEC 171, 172 (1973). *See also Exxon Nuclear Co.* (Nuclear Fuel Recovery and Recycling Center), ALAB-425, 6 NRC 199, 201 (1977).

[88] A ''sufficiency'' review of uncontested issues may, for example, prove suited to NRC Staff summaries of key safety and environmental findings, along with witnesses (from the NRC Staff, on the one hand, and separately from the license applicant) prepared to answer board inquiries. Or, if the uncontested issues prove relatively straightforward, a simple ''paper'' review may suffice.

[89] As noted *supra,* the three cited subsections require federal agencies to (A) ''utilize a systematic, interdisciplinary approach'' in making decisions on major federal actions that could significantly affect the environment, (C) prepare regarding such actions an EIS that addresses impacts, alternatives and other considerations, and (E) study and develop alternatives where there are ''unresolved conflicts concerning alternative uses of available resources.'' 42 U.S.C. § 4332(2)(A), (C), and (E).

of the Staff and the applicant and the conclusions of the ACRS, rather than duplicating the NRC Staff's review.''[90] He directs our attention to *Calvert Cliffs' Coordinating Comm., Inc. v. AEC,* where the court of appeals held that a hearing board must examine the Staff's EIS carefully to determine the adequacy of the Staff's review and ''must *independently* consider the final balance among conflicting factors that is struck in the staff's recommendation.''[91] Based on the D.C. Circuit's holding in *Calvert Cliffs,* the Chief Administrative Judge asks (as to the three baseline NEPA issues) whether a licensing board must

> study the relevant parts of the record, such as the Applicant's environmental report and the Staff's F[inal] EIS, pose written or oral questions to the Staff and Applicant, request that they submit additional information, and conduct whatever hearings that may be deemed necessary to resolve any questions or concerns, so that the Board can make an independent initial decision on each ''baseline'' NEPA Issue.[92]

The Chief Administrative Judge, however, certifies a less detailed question: what is the appropriate scope (i.e., standard) of review for boards in making findings on the three baseline NEPA issues as required under sections 51.105(a)(1)-(3) and 2.104(b)(3)?[93]

The NRC Staff asks the Commission to prohibit *de novo* licensing board review of the three NEPA baseline questions.[94] In the preceding section of today's decision, we held that as a general matter we do not expect *de novo* board review of uncontested issues. That ruling applies fully to the three NEPA baseline issues insofar as NRC Staff factual or technical judgments are concerned. But we acknowledge that, under our regulations, boards must ''[*i*]*ndependently* consider the final balance among conflicting factors contained in the record of the proceeding.''[95]

We direct our boards to follow the approach spelled out in the D.C. Circuit's seminal *Calvert Cliffs* decision. There, the court indicated that while NEPA demands independent environmental judgments by NRC licensing boards — as the body with responsibility for authorizing issuance of construction permits — the boards need not rethink or redo every aspect of the NRC Staff's environmental findings or undertake their own fact-finding activities:

---

[90] LBP-05-7, 61 NRC at 197, quoting *North Anna* Joint Memorandum at 5.

[91] *Id.* at 198, quoting 449 F.2d at 1118 (emphasis added).

[92] *Id.*

[93] *Id.*

[94] NRC Staff's May 25 Brief at 27-28.

[95] 10 C.F.R. § 51.105(a)(2).

> [C]onsideration which is entirely duplicative is not necessarily required. But independent review of staff proposals by hearing boards is hardly a duplicative function. A truly independent review provides a crucial check on the staff's recommendations. The Commission's hearing boards automatically consider nonenvironmental factors, even though they have been previously studied by the staff. Clearly, the review process . . . provides an important opportunity to reject or significantly modify the staff's recommended action.
>
> * * * *
>
> The Commission's regulations provide that in an uncontested proceeding the hearing board shall on its own determine whether the application and the record of the proceeding contain sufficient information, and the review of the application by the Commission's regulatory staff has been adequate, to support affirmative findings on various nonenvironmental factors. NEPA requires at least as much automatic consideration of environmental factors. In uncontested hearings, the board need not necessarily go over the same ground covered in the detailed [environmental impact] statement. But it must at least examine the statement carefully to determine whether the review . . . by the Commission's regulatory staff has been adequate. And it must independently consider the final balance among conflicting factors that is struck in the staff's recommendation.[96]

In sum, under *Calvert Cliffs* and under NRC regulations, licensing boards must reach their own independent determination on uncontested NEPA ''baseline'' questions — i.e., whether the NEPA process ''has been complied with,'' what is the appropriate ''final balance among conflicting factors,'' and whether the ''construction permit should be issued, denied or appropriately conditioned.''[97] But in reaching those independent judgments, boards should not second-guess underlying technical or factual findings by the NRC Staff. The only exceptions to this would be if the reviewing board found the Staff review to be incomplete or the Staff findings to be insufficiently explained in the record. ''What *Calvert Cliffs'* requires is an 'independent review of staff proposals' by the Board, and conclusions independently arrived at *on the basis of evidence in the record,* including the staff's Final Environmental Impact Statement.''[98] A licensing board's NEPA review must not be so intrusive or detailed as to involve the board in ''independent basic research'' or a ''duplicat[ion of] the analysis previously performed by the staff.''[99]

---

[96] 449 F.2d at 1118 (footnote and internal quotation marks omitted).

[97] *See* 10 C.F.R. § 2.104(b)(3); 10 C.F.R. § 51.105(a)(1)-(3).

[98] *Midland,* ALAB-123, 6 AEC at 335-36 (emphasis added).

[99] *Id.* at 335.

E. Boards' Responsibility Under NEPA To ''Weigh'' Costs and Benefits

The Chief Administrative Judge also certifies the question whether omitting section 51.105(a)(3)'s cost-benefit ''weighing'' language from both the *LES* and the ESP notices was intended to narrow the boards' scope of NEPA review in mandatory hearings.[100] The answer is no.

Our response to this question is governed by 10 C.F.R. § 51.105(a)(3). It *requires* boards to weigh benefits against costs, and could not be altered absent a notice-and-comment rulemaking.[101] The hearing notices' failure to refer specifically to the weighing requirement is inconsequential.[102]

We turn next to how these general principles apply to the ESP and uranium enrichment cases before us. In uranium enrichment facility construction permit proceedings such as *LES* and *USEC,* a board's duty to conduct, at *this* stage of the proceedings, the ''weighing'' specified in section 51.105(a)(3) is beyond question. As we stated in an earlier *LES* proceeding, involving the proposed Claiborne Enrichment Center, ''NEPA is generally regarded as calling for some sort of a weighing of the environmental costs against the economic, technical, or other public benefits of a proposal.''[103] We went on to point out that our own regulations ''direct the Staff to consider and weigh the environmental, technical, and other costs and benefits of a proposed action and alternatives.''[104]

It is telling that, although the earlier *LES* proceeding was governed by a Notice of Hearing that lacked the same ''weighing'' language that is absent from the current *LES* notice of hearing, the Board nonetheless conducted a weighing and balancing.[105] And although we did not fully agree with the Board's NEPA balancing analysis on the merits, we did not question the Board's threshold decision to ''weigh'' and ''balance'' the facility's advantages and disadvantages in the first place. In sum, the Licensing Boards in our two currently pending uranium

---

[100] *Id.* at 198. The *USEC* notice likewise omits this language. The ''missing'' language states:

> ''The presiding officer will . . . [d]etermine, after weighing the environmental, economic, technical, and other benefits, against environmental and other costs, and considering reasonable alternatives, whether the construction permit or license to manufacture should be issued, denied, or appropriately conditioned to protect environmental values.''

[101] *See* 5 U.S.C. § 553; *see also, e.g., Shell Offshore Inc. v. Babbitt,* 238 F.3d 622, 629-30 (5th Cir. 2001); *Appalachian Power Co. v. EPA,* 208 F.3d 1015, 1028 (D.C. Cir. 2000). *But cf. National Whistleblower Center v. NRC,* 208 F.3d 256, 258 (D.C. Cir. 2000) (NRC may issue case-specific order overriding procedural regulation).

[102] In fact, the hearing notices require compliance with Part 51, which in turn expressly requires cost-benefit ''weighing.'' *See, e.g., USEC,* CLI-04-30, 60 NRC at 428, 437.

[103] *Claiborne,* CLI-98-3, 47 NRC at 88.

[104] *Id.* at 89.

[105] *Id.* at 84-86 (1998), *aff'g in part and rev'g in part* LBP-96-25, 44 NRC 331, 336-75 (1996).

enrichment facility proceedings must conduct, at *this* stage of the proceedings, the ''weighing'' specified in section 51.105(a)(3).

By contrast, the Licensing Boards in our three currently pending ESP cases cannot perform cost-benefit ''weighing'' — because an ESP is only a ''partial'' construction permit and 10 C.F.R. § 52.21 explicitly exempts both the NRC Staff and the applicant from assessing the ESP's benefits.[106] Because the environmental report will lack such an assessment, neither the NRC Staff nor the Licensing Boards can conduct the ''weighing'' in its EIS ordinarily required under NEPA.[107] This does not equate to evading the NEPA cost-benefit analysis, but merely postpones the analysis until the next (combined operating license) phase of licensing.[108] At that time, the NRC Staff and ESP applicants will have much more cost-benefit information to provide reviewing licensing boards. Postponing the NEPA cost-benefit balancing simply reflects the limited scope of an ESP proceeding, as compared with that of a full construction permit case (addressing both site and plant design) or a combined license proceeding (such as *LES* and *USEC*).

F. Boards' Responsibility Under NEPA To Consider Reasonable Alternatives

The ESP notices state that the licensing boards must make the third threshold NEPA determination (whether the license should be issued, denied, or appropriately conditioned to protect environmental values) only ''after considering reasonable alternatives.'' The *LES* and *USEC* notices, however, contain no language referring to consideration of reasonable alternatives. This difference is the basis for the Chief Administrative Judge's final certified question to us: Was omitting the phrase ''after considering reasonable alternatives'' from the *LES* and *USEC* notices intended to create a distinction between the responsibilities of the *LES* and the ESP Licensing Boards?[109]

---

[106] *See also* 10 C.F.R. §§ 52.17(a)(2), 52.18; Final Rule: ''Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Reactors,'' 54 Fed. Reg. 15,372 (Apr. 18, 1989).

[107] The Board's analysis is limited to material ''contained in the record of the proceeding.'' 10 C.F.R. § 51.105(a)(2).

[108] *See* 10 C.F.R. §§ 51.97, 52.79(a)(1), 52.89. *See generally Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-9, 55 NRC 245, 249 (2002).

[109] LBP-05-7, 61 NRC at 198-99.

The short answer is no. Both our regulations[110] and NEPA itself[111] require the NRC to consider alternatives before deciding whether to take major federal actions significantly affecting the environment. But, as with the cost-benefit issue discussed above, the ''reasonable alternatives'' issue does not apply with full force to ESP (or ''partial'' construction permit) cases. At the ESP stage of the construction permit process, the boards' ''reasonable alternatives'' responsibilities are limited because the proceeding is focused on an appropriate *site,* not the actual construction of a reactor. Thus, boards must merely weigh and compare alternative sites, not other types of alternatives (such as alternative energy sources).[112] By contrast, the requirement for consideration of ''reasonable alternatives'' has a broader scope in construction permit proceedings for uranium enrichment facilities. Because the scope of these latter proceedings is not limited to mere site selection, the quoted phrase — ''after consideration of reasonable alternatives'' — as applied in those proceedings is not limited to a consideration of alternative sites.

We close our discussion of this final certified question by offering what we believe is the reason for the disparity among the different notices of hearing. The discrepancy in all likelihood stems from the slight wording difference between 10 C.F.R. § 51.105(a)(1)-(3) (referring to alternatives) and 10 C.F.R. § 2.104(b)(3) (not referring to alternatives). It appears that the drafter of the ESP notices relied on section 51.105, while the drafters of the *LES* and *USEC* notice relied on section 2.104 and also tracked almost *verbatim* the language of the 1991 Notice of Hearing in the earlier construction permit proceeding for LES's Claiborne Enrichment Center.[113] A review of our mandatory hearing notices for the 30 years preceding our publication of the *USEC* notice on October 18, 2004, reveals that the instant discrepancies are not isolated occurrences. Although fourteen notices have included the phrase ''after considering reasonable alternatives'' or

---

[110] *See* 10 C.F.R. § 51.71(d) (NRC Staff obligation to analyze ''alternatives''); 10 C.F.R. § 51.105(a)(3) (licensing boards' obligation to consider ''reasonable alternatives''). *See also* 10 C.F.R. §§ 52.17(a)(2), 52.18 (''an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed'').

[111] NEPA §§ 102(2)(C)(iii), 102(2)(E), 42 U.S.C. §§ 4332(2)(C)(iii), 4332(2)(E). *See generally United States Department of Energy* (Clinch River Breeder Reactor Plant), CLI-76-13, 4 NRC 67, 76, 79, 81, 89 n.28, 90-91, 92 (1976); *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), LBP-96-25, 44 NRC 331, 340-41 (1996), *aff'd in part and rev'd in part on other grounds,* CLI-98-3, 47 NRC 77 (1998).

[112] *See* 10 C.F.R. §§ 52.17(a)(2), 52.18.

[113] 56 Fed. Reg. 23,310 (May 21, 1991).

''considering available alternatives,''[114] six others have omitted those phrases.[115] We resolve that discrepancy today by instructing the NRC Staff to include in all future mandatory hearing notices the language from the *Clinton* notice describing the NEPA elements of construction permit and early site permit proceedings — language that includes the requirement to ''consider[ ] reasonable alternatives.''[116]

Finally, we observe that, even though section 2.104(b) contains no direct reference to considering reasonable alternatives, it still imposes that same requirement indirectly, by mandating that applications satisfy the standards of Part 51, Subpart A.[117] That subpart includes section 51.105(a)(3), which in turn requires licensing boards to ''consider reasonable alternatives.''

G. Extent of Intervenors' Participation in Mandatory Hearings

Although the Chief Administrative Judge did not certify a question to us regarding the extent of intervenor participation in the mandatory hearings at issue, the Board in *North Anna* did raise this question and requested the parties' comments.[118] The question is relevant to the *LES, Clinton,* and *North Anna* proceedings, in each of which Intervenors are participating, and also may be relevant to the *USEC* proceeding, where two petitions to intervene are pending.[119] We therefore choose to address the *North Anna* Board's question *sua sponte.*

The scope of the Intervenors' participation in adjudications is limited to their admitted contentions, i.e., they are barred from participating in the uncontested portion of the hearing. Any other result would contravene the objectives of our ''contention'' requirements. Our 2004 revisions to the Subpart L procedural rules permit intervenors (and other parties) to submit written testimony *only* on admitted *contentions*[120] and to submit proposed findings of fact and conclusions of law relevant *only* to those *contentions* that were addressed in the oral hearing.[121] Similarly, our 1989 amendments to the Subpart G procedural rules limited both an intervenor's proposed findings and its appeals to *only* those *contentions* that

---

[114] 39 Fed. Reg. 37,528, 38,013, 42,938, & 44,065; 40 Fed. Reg. 6835, 25,708, 47,219, & 52,768; 41 Fed. Reg. 44,761; 42 Fed. Reg. 8439 & 8441; 68 Fed. Reg. 67,489 & 69,426; 69 Fed. Reg. 2636. *See also* 39 Fed. Reg. 33,588.

[115] 44 Fed. Reg. 26,229; 53 Fed. Reg. 15,315 & 15,317; 56 Fed. Reg. 23,310; 66 Fed. Reg. 19,994; 69 Fed. Reg. 5873.

[116] 68 Fed. Reg. 69,426, 69,427 (Dec. 12, 2003).

[117] 10 C.F.R. § 2.104(b)(3)(i).

[118] *See North Anna* Joint Memorandum at 1, citing Transcript of Sept. 15, 2004 Prehearing Conference at 439.

[119] As noted above, the *Grand Gulf* proceeding is uncontested.

[120] 10 C.F.R. § 2.1207(a)(1).

[121] 10 C.F.R. § 2.1209.

the intervenor had itself placed in controversy. Our purpose there was ''to ensure that the parties and adjudicatory tribunals focus their interests and adjudicatory resources on the contested issues as presented and argued by the party with the primary interest in, and concerns over the issues.''[122] This same purpose likewise justifies our limiting the scope of intervenor participation in mandatory hearings.

H. Other Matters

The Intervenors (joined by Petitioner in *USEC*) offer a set of suggestions, all aimed at ensuring that various documents reflect the nonfinal nature of the environmental reviews to date. They suggest that the titles of the Boards' decisions should reflect the fact that they did not include some NEPA issues in their review.[123] The Intervenors and Petitioner also suggest styling the draft and final EISs as ''partial,''[124] and styling any issued ESP as a ''conditional ESP,'' due to the absence of any determination as to compliance with section 401 of the Clean Water Act.[125] While we have no objection in principle to the Boards and parties using such clarifying language, we consider the language to be quite unrelated to the certified questions regarding NEPA. Therefore, we decline to address the suggested language here.

Finally, the intervenors and petitioner urge the Commission to consider the effect of any approvals on cultural resources, pursuant to the National Historic Preservation Act.[126] This matter is also unrelated to the certified questions.

IV. CONCLUSION

We instruct the Licensing Boards in the three ESP cases and the two uranium enrichment cases before us today to follow the guidance set forth above when conducting mandatory hearings.

---

[122] Final Rule: ''Rules of Practice for Domestic Licensing Proceedings — Procedural Changes in the Hearing Process,'' 54 Fed. Reg. 33,168, 33,178 (Aug. 11, 1989).

[123] Intervenors' *North Anna* Memorandum at 3; Intervenors' Response to Certified Questions (CLI-05-9), dated May 18, 2005, at 6-7.

[124] Intervenors' *North Anna* Memorandum at 3.

[125] *Id.* at 3-4, citing 33 U.S.C. § 1341; Intervenors' Response to Certified Questions (CLI-05-9), dated May 18, 2005, at 6-7. The Intervenors in the *North Anna* proceeding alternatively propose requiring Dominion to obtain a certification from the Commonwealth of Virginia stating that the site will meet federal water quality standards. Intervenors' Response to Certified Questions (CLI-05-9), dated May 18, 2005, at 8.

[126] Intervenors' Response to Certified Questions (CLI-05-9), dated May 18, 2005, at 8, citing 16 U.S.C. § 470(f).

IT IS SO ORDERED.

For the Commission[127]

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 28th day July 2005.

Commissioner Gregory B. Jaczko respectfully dissents, in part:

While in large part I concur with my fellow Commissioners in this Order, I dissent as to the Commission's decision to determine, at this stage of the proceedings, the extent of an intervenor's ability to participate in the uncontested portions of a mandatory hearing.

The question as to the intervenors' role in a mandatory hearing was not certified to the Commission for resolution. The Commission has, instead, elected to address this issue under its *sua sponte* authority. In doing so, the Commission did not request, and therefore did not receive the benefit of having this issue fully addressed in the briefs filed by the parties. This is an extremely important issue and if the Commission elects to determine this issue in a *sua sponte* fashion, the resulting decision should be as well informed as possible.

Without having the views of all the parties regarding this issue on the record before me, I do not have an adequate basis to conclude that this decision's discussion and ruling on the intervenor's role meets those standards, and thus I am required to dissent.

[127] Commissioner Merrifield was not present when this item was affirmed. Accordingly the formal vote of the Commission was 2-1 in favor of the decision. Commissioner Merrifield, however, had previously voted to approve this Memorandum and Order and had he been present he would have affirmed his prior vote.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Thomas S. Moore, Chairman
Dr. Charles N. Kelber
Dr. Peter S. Lam

In the Matter of **Docket No. 70-03098-ML**
(ASLBP No. 01-790-01-ML)

DUKE COGEMA STONE & WEBSTER
(Savannah River Mixed Oxide Fuel Fabrication Facility) **July 20, 2005**

ORDER
(Terminating Proceeding)

On May 10, 2005, Duke Cogema Stone & Webster (DCS) filed a motion to terminate this proceeding because all admitted contentions had been resolved and the deadline for late-filed contentions regarding the NRC Staff's Final Safety Evaluation Report (FSER) had passed. Thereafter, on May 12, 2005, the Licensing Board issued an order stating that ''[b]efore terminating the proceeding, however, we must ensure that the terms of our earlier June 29, 2001 protective order and affidavit of nondisclosure regarding the accounting and destruction of proprietary information have been followed by [Georgians Against Nuclear Energy] GANE with respect to the material it obtained pursuant to that protective order.''[1] The order then established a schedule for GANE to file an accounting of

[1] Licensing Board Memorandum and Order (Concerning Responsibilities Under Protective Order) (May 12, 2005) at 1 (unpublished).

the proprietary information in its possession and to deliver the documents to the Board for destruction.

GANE timely filed its accounting and delivered the proprietary documents in its possession to the Board for destruction. Neither DCS nor the NRC Staff filed an objection to GANE's accounting. The Board accepts GANE's accounting and has taken the necessary steps to have the proprietary documents destroyed.

In its response to DCS's motion to terminate the proceeding, the Staff indicated that after the Board terminated the proceeding the Staff would initiate actions to terminate the NRC security clearances issued to GANE's counsel and expert.[2] The Staff's response prompted a request from GANE that its clearances be maintained until it is determined whether the clearances will be needed for the so-called ''operating license'' proceeding for the MOX facility, a proceeding in which GANE stated it intends to intervene.[3] On June 15, 2005, the Board directed the Staff to respond, inter alia, to GANE's request to keep the clearances.[4] On July 1, 2005, the Staff responded, concluding that the Commission's regulations do not permit GANE's security clearances to be maintained.[5] GANE filed no response to the Staff's filing.

The Board has resolved all the admitted contentions in the proceeding and the time for late-filed contentions on the Staff's FSER has expired without any such contentions being filed. Further, all of GANE's outstanding obligations regarding proprietary information have been fulfilled. Accordingly, the proceeding is hereby *terminated.* Finally, as the Staff asserts, the applicable regulation, 10 C.F.R. § 2.905(g), requires that GANE's security clearances be terminated at the conclusion of the proceeding.

---

[2] NRC's Staff's Response to DCS' Motion To Terminate Proceeding (May 25, 2005) at 5.

[3] Letter from Diane Curran to Administrative Judges (May 27, 2005) at 1.

[4] Licensing Board Order (June 15, 2005) at 1 (unpublished).

[5] NRC Staff's Response to Board's Order (July 1, 2005) at 7.

IT IS SO ORDERED

THE ATOMIC SAFETY AND
LICENSING BOARD[6]

Thomas S. Moore, Chairman
ADMINISTRATIVE JUDGE

Dr. Charles N. Kelber
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 20, 2005

[6] Copies of this Order were sent this date by Internet e-mail transmission to (1) GANE, (2) BREDL, (3) DCS, and (4) the NRC Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Michael C. Farrar, Chairman
Alan S. Rosenthal
Dr. Peter S. Lam

In the Matter of **Docket Nos. 50-336-LR**
50-423-LR
(ASLBP No. 05-837-01-LR)

DOMINION NUCLEAR CONNECTICUT, INC.
(Millstone Nuclear Power Station,
Units 2 and 3) **July 20, 2005**

In this license renewal case, the Licensing Board finds that (1) petitioner County's unjustified belatedness in presenting emergency planning contentions does not preclude its participation, once the relevant offsetting factors are properly evaluated; (2) the asserted contention-drafting weaknesses are not of the sort that should block participation by a highly motivated and crucially affected local government entity on matters for which it is legally responsible; and (3) the request for an exemption from the jurisdictional barrier to the petition has a colorable basis and thus should be certified to the Commission for resolution.

RULES OF PRACTICE: INTERVENTION PETITION (GOOD CAUSE FOR LATE FILING)

Arguments about the insufficiencies of *constructive* notice are inconsequential in light of the adoption of a legislative resolution demonstrating that the petitioner county government had *actual* notice of the proposed license renewals at a relatively early date. The problems inherent in the petitioner's efforts, under a

new administration, to launch its participation in an unfamiliar forum governed by specialized rules do not establish good cause for its belatedness.

RULES OF PRACTICE: NONTIMELY INTERVENTION PETITION (BALANCING OF CRITERIA)

Under the current Rules (10 C.F.R. § 2.309(c)(1)), the need for balancing all the relevant factors — regardless of the absence of good cause for the late filing — is made explicit, thus codifying the Commission's *West Valley* interpretation of former Rules. *Nuclear Fuel Services, Inc.* (West Valley Reprocessing Plant), CLI-75-4, 1 NRC 273 (1975).

RULES OF PRACTICE: STANDING TO INTERVENE

Given that the Rules of Practice long conferred a special status on any State and local governments that wished to participate in some fashion in the adjudicatory process (*see* 10 C.F.R. § 2.715(c) (former rules)), and now confer automatic full-participation standing on such governmental bodies if they have jurisdiction over the geographical area in which the reactor at issue is located (*see id.* § 2.309(d)(2)(i) (current rules)), similar reasoning supports finding standing on behalf of a local government having jurisdiction over a geographical area admittedly affected by reactor operations, with respect to an issue that stems precisely from those effects.

RULES OF PRACTICE: NONTIMELY INTERVENTION PETITION (OTHER MEANS)

In light of the parties' concession about the apparently infinitesimal success rate of petitions filed under 10 C.F.R. § 2.206, and notwithstanding whatever a careful, thorough historical analysis might show on that score, the Board finds no basis for treating section 2.206 petitions as a practical ''other means'' available for protecting the County's interests here within the meaning of the fifth factor in the regulatory criteria.

RULES OF PRACTICE: NONTIMELY INTERVENTION PETITION (REPRESENTATION BY EXISTING PARTIES)

Even if there were a private party currently pressing a similar emergency planning contention, the County's overriding, paramount interest in — and responsibility for — that particular subject prevents that interest from being ''represented by existing parties.''

RULES OF PRACTICE: NONTIMELY INTERVENTION PETITION (BROADENING AND DELAYING)

The fact that a petitioner's participation will ''broaden the issues'' and ''delay the proceeding'' receives relatively less weight in a license renewal proceeding brought over a decade before the expiration of the first of the existing licenses, and in which the Staff's safety review is not due to be concluded for another several months.

RULES OF PRACTICE: NONTIMELY INTERVENTION PETITION (ASSISTING IN DEVELOPMENT OF RECORD)

In terms of whether it can ''reasonably be expected'' that a petitioner's participation would ''assist in developing a sound record,'' weaknesses in timing and content of an initial filing can be overcome by subsequent written filings, as well as by an oral demonstration of a sense of purpose and a commitment to participate and to contribute.

RULES OF PRACTICE: NONTIMELY INTERVENTION PETITION (BALANCING OF CRITERIA)

Balancing of the regulatory factors in favor of petitioner County accurately reflects the County's status as a local government and the nature of its contention, whereby it seeks to intervene on a subject that it is not only expert in, but about which it is required by its government role to take on a heavy responsibility in finding and implementing solutions.

RULES OF PRACTICE: NONTIMELY INTERVENTION PETITION (BALANCING OF CRITERIA)

Excusing the unjustified belatedness of the petitioner County does not establish an alarming precedent undercutting the rules for the benefit of all dilatory petitioners, but rather simply recognizes the different role and strengths that a local government can, in the public interest, bring to NRC proceedings.

RULES OF PRACTICE: INTERVENTION PETITION (PLEADING REQUIREMENTS)

The reasoning behind, and the purposes served by, the increased stringency of the agency's rules on pleading and supporting contentions are not undercut by the Board's finding that the petitioner County's pleading was adequate, given its acknowledged crucial role and substantive expertise on the emergency planning

subject matter, about which the County — more so than the Applicant or the NRC Staff — will be held to account by its populace if the need to activate an emergency plan ever arises.

RULES OF PRACTICE: INTERVENTION PETITION (PLEADING REQUIREMENTS)

Other, nongovernmental prospective intervenors may be held to a higher standard than Petitioner County when applying the contention pleading rules to them, in order to assure that they have made a serious commitment to the process, have come forward with a specific focus, and are capable of making — and prepared to make — a knowledgeable contribution on real issues, elements that seem to underlie the periodic changes that have made those pleading rules increasingly stringent. *See* the instruction in *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999), that ''the rule helps to insure that full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions.''

ADJUDICATORY BOARDS: JURISDICTION

Whether the Licensing Board has jurisdiction is a question for the Board, not the parties, to determine, for a tribunal invariably has the jurisdictional power and duty to determine whether it has jurisdiction. Even where it appears that a tribunal may ultimately be found to lack jurisdiction over a matter, no principle precludes that tribunal, before addressing that question, from simply suggesting to the parties that there may be a way to settle their grievances by way of discussions among themselves, which could lead to a settlement agreement that calls for the petitioner simply to withdraw its initiating papers, leaving the tribunal with nothing to decide and thus no need ever to pass upon whether it had jurisdiction over the (settled) subject matter.

ADJUDICATORY BOARDS: AUTHORITY OVER STAFF ACTION

A licensing board's urging the parties to conduct settlement negotiations, in a matter in which the board's jurisdiction might ultimately turn out to be lacking, does not contravene principles precluding licensing boards from attempting to direct the Staff in the performance of its nonadjudicatory regulatory functions, where settlement suggestions evinced no intention to direct the Staff in how it performs its substantive emergency planning regulatory duties but merely sug-

gested one possible approach to settlement, whose adoption and implementation was left entirely to the parties to discuss without any input from the Board.

RULES OF PRACTICE: CERTIFICATION OF ISSUES TO COMMISSION

Although emergency planning issues are ordinarily and intentionally excluded from license renewal proceedings, the situation at hand deserves some attention because (1) the petitioning County is not located in the same State as the reactor and thus the usual political forces and administrative relationships that might help the County draw attention to its concerns, outside the adjudicatory process, are not at work; and (2) the situation presents an unusual combination of factors such as population density (both permanent and vacation), forecasted changes therein, and geographical and roadway limitations. Thus it is appropriate for the Commission to consider whether an exemption should be granted to allow the County's concerns to be addressed in this license renewal process, so that the growth of the external area could be given some consideration along with the aging of the internal equipment.

RULES OF PRACTICE: SETTLEMENT

The adjudicatory process may not be the best place for those units of local government that are not opposed to a facility's existence but that genuinely wish to work on enhancing its safety to hammer out their areas of disagreement with the Staff; a more collaborative approach may be in order where the State or local governmental body's interest lies in ensuring that the contemplated license activity is conducted with due regard for the public health and safety and for the preservation of environmental values, which is the ultimate objective of all governmental bodies and represents a common goal that could most efficiently and effectively be achieved not through butting heads in opposition in a hearing room, but rather through putting heads in combination in a conference room.

EMERGENCY PLAN: EMERGENCY PLANNING ZONES (SIZE)

Certification of an exemption request to the Commission does not reflect endorsement of petitioner County's expansive views as to the geographic reach of NRC review of emergency planning. The County is free to make its own plans for areas farther removed than the geographic bounds set by applicable regulations, but doing so is within its bailiwick, not the NRC's.

RULES OF PRACTICE: SETTLEMENT

Pendency of certification to the Commission, while halting any further action by the Board on the pending contentions, does not preclude the parties from resurrecting their settlement discussions in an effort to reach an arrangement amongst themselves that would avoid any need for adjudication to continue. Alternatively, the Commission may simply choose to exercise its supervisory authority over the Staff to direct the Staff to interact with the County in a manner that would moot the adjudication.

TECHNICAL ISSUES DISCUSSED

The following technical issue is discussed: emergency planning.

MEMORANDUM AND ORDER
(Concerning Belated Intervention Petition)

INTRODUCTION AND SUMMARY

The Setting

The County of Suffolk, New York, put before the agency in early February a belated request that it be allowed to intervene to challenge an aspect of the application of Dominion Nuclear Connecticut for 20-year extensions of its existing 40-year licenses for the second and third units of the Millstone Nuclear Power Station. Dominion's licenses are not set to expire until 2015 and 2025, respectively; we are told that the NRC Staff's evaluation of the license renewal applications is not scheduled to be completed until November of this year. Tr. at 20.

The Millstone Station is located in southeastern Connecticut, on the shore of Long Island Sound near New London. Suffolk County occupies the eastern sector of New York State's Long Island, with portions of the County's North Fork and several adjoining islands extending northeasterly across the Sound, reaching to less than 10 miles from the Millstone reactors.

Based upon that proximity, the County seeks to have admitted before us, and thereafter to litigate, a set of contentions that all focus on challenging the adequacy of Dominion's plan for dealing with potential post-accident emergency situations that might pose a radiological threat to Suffolk residents and visitors. In presenting that challenge, the County focuses particularly on the demographic and related changes anticipated over the license renewal period and the peculiar geographic and other limitations that restrict evacuation of areas of the County.

The Arguments

Dominion and the NRC Staff oppose the County's intervention on three key grounds. As to *timeliness,* they argue that the petition, filed 8 months after the deadline, was woefully and unjustifiably late (*see* 10 C.F.R. § 2.309(c)(1)(i)), and does not benefit sufficiently from the offsetting factors that the applicable regulation instructs us to consider (*id.* 2.309(c)(1)(ii)-(viii)); as to *content,* they claim that the contentions are not framed or supported in a manner that meets the agency's stringent pleading requirements (*see id.* § 2.309(f)(1)); and in any event, as to *jurisdiction,* they point out that the County seeks to raise issues that Commission regulations and decisions say are to have no part in license renewal proceedings (*see id.* § 50.47(a)(1), and CLI-04-36, issued earlier herein, 60 NRC 631, 640 (2004)).

Countering, the County points out that Commission precedents leave room for belated interventions even where a petition is inexcusably late (*see, e.g., Nuclear Fuel Services, Inc.* (West Valley Reprocessing Plant), CLI-75-4, 1 NRC 273 (1975)). On that score, the County argues that for a number of reasons, particularly the 10-year time frame before the expiration of the first of the licenses' current terms, considerations of *untimeliness* should not bar its intervention in light of the support it finds in the offsetting regulatory factors.

As to *content,* the County argues that its contentions were adequately pleaded in light of their stated purpose and the County's inherent expertise in the subject matter. To overcome the *jurisdictional* hurdle, the County asked (albeit in a reply filing) for a waiver of, or exception to, the Commission-imposed proscription against our entertaining emergency plan issues, on the grounds that the purposes for which the Commission adopted that ban would not be served by its application to the County's petition here (*see* 10 C.F.R. § 2.335(b)). Under subsections (c)-(d) of that Rule, we can *deny* such a request ourselves but not surprisingly may not *grant* it; instead, if we think it might be meritorious, we must send it to the Commission, which authored the underlying proscription, for determination of whether a waiver/exception is warranted.

The Negotiations

As previously recounted,[1] partway through a conference call we convened on April 12, it appeared from the parties' presentations (*see* Tr. at 43-44, 51 *et seq.*) that all three — while holding disparate views on many aspects of the legitimacy of

[1] Our description herein of the genesis, conduct, and outcome of the negotiations is taken largely verbatim from three of our prior unpublished orders, entered on April 15, May 11, and June 3, 2005. We omit quotation marks except where they serve to emphasize particular aspects of what we said on those occasions.

the pending petition — ''might hold common views on certain values underlying the petition, i.e., on the benefits that could be achieved by the establishment of a long-term working relationship centered on their mutual interest in well-conceived emergency plans protecting residents not just of southeastern Connecticut but also of areas of Suffolk County.'' April 15 Memorandum of Conference Call at 1. Seeing that commonality, we suggested that the parties ''utilize the pending dispute as a springboard for establishing just such a relationship (*see, e.g.,* Tr. at 57-58)'' as a way of settling the matter. *Ibid.*

In thus building on the participants' views to suggest settlement possibilities, the Board noted that two of its members were then facing obligations in another proceeding that involved more pressing priorities than were then presented herein.[2] Because this Board was thus not able to turn immediately to the pending matters, we suggested (Tr. at 89-90) that

> no decisional delay would be incurred were the parties to attempt to agree upon a Memorandum of Understanding, or other similar arrangement, that would not only guide the resolution of any current controversy among them but would, more importantly, provide a framework for cooperative solutions of similar emergency planning matters that might arise over the coming years and even decades (if the sought-after license renewals are granted) of operation of the Millstone reactors.

April 15 Memorandum at 2. In other words, based on their own expressions, we thought the participants had the chance to settle not only the specifics of this intervention request but also any related matters that would likely arise over the lengthy future, and urged them to attempt to do so.

Given the existence of three factors — i.e., the parties' apparent receptivity to the Board's settlement suggestion, the Board's evaluation of relative decisional priorities and timing, and the Commission's emphasis on the value of settlements (10 C.F.R. § 2.338) — we indicated we would hold the matters before us in abeyance pending receipt by May 6 of a progress report on the parties' discussions (*see* Tr. at 90). That report, we said, would likely indicate that one of three situations existed: (1) that settlement chances were ''hopeless and you want the case decided,'' (2) that ''you've settled the thing and the petition can be withdrawn,'' or (3) that ''you're making progress and need more time . . . .'' (Tr. at 93-94). As we later elaborated, ''if those discussions are ultimately successful, the now-pending matters could then be dismissed by agreement, with the short-

[2] *See* Tr. at 89, referring to *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), Docket No. 72-22-ISFSI, in which a lengthy April 6 oral argument had only recently been held on the State of Utah's Motion for Reconsideration of that Board's decision on ''F-16 Aircraft Accident Consequences.''

term-focused adjudication thus terminated in favor of long-term non-adjudicatory solutions'' (April 15 Memorandum at 2).

On the anticipated date of May 6, the three participants filed with us separate ''progress reports on the interaction among them that we had thought might enable the matter pending in front of us to be settled.'' May 11 Memorandum. Although, as will be discussed below, we found certain arguments contained in the reports filed by Dominion and the Staff to be problematic, in the circumstances we chose not to address those aspects then; instead, we took a positive focus by simply saying that it appears from the three reports ''that a scheduled settlement meeting had to be postponed but that rescheduling efforts, to which all parties are committed, are underway.'' *Ibid.* We concluded with an exhortation: ''Pending further order of this Board, two of whose members remain occupied with a more pressing matter, the parties are encouraged to continue their settlement efforts . . . .'' *Ibid.*

A settlement meeting was indeed held on May 18. Each participant subsequently filed a report expressing its view of the meeting; the last such report was received on May 26. These caused us to observe that ''the upshot of those reports, it is fair to say, is that, while some progress was achieved in promoting an ongoing relationship, and in sharing information, among the participants, *settlement of the matter pending before us is not foreseeable.*'' June 3 Status Memorandum at 1 (emphasis added).

After commending the parties for undertaking those settlement efforts, we noted that the more pressing matter that had demanded our priority attention had also been completed the previous week,[3] and that we were thus then in position to turn our attention to deciding the merits of the County's pending intervention petition and the oppositions thereto. June 3 Memorandum at 1-2. We observed then that our decision on the pending petition would involve the key issues that had been discussed on the conference call and that we would ''also be passing upon the legitimacy of certain other arguments presented by the participants.'' *Id.* at 2. We now address all these matters.

The Result

This matter is not as simple as Dominion and the NRC Staff would have it; indeed, it is far more complex. In the first place, and as we explain in Part I below, the County's belatedness does not preclude its participation, once the relevant offsetting factors are properly evaluated. Nor, as we indicate briefly in Part II, are the asserted contention-drafting weaknesses of the sort that should block

[3] *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-05-12, 61 NRC 319 (2005).

consideration of a pleading of this nature by a highly motivated and crucially affected local government entity on matters for which it is legally responsible.

We consider in Part III, below, the jurisdictional barrier to the petition, and the exemption request that seeks a way around that barrier. Finding that request to have a colorable basis, we CERTIFY it to the Commission for resolution.

As adverted to on page 64 above and just before the start of this section, we also put to rest in Part III other matters reflected in the opposing filings. Because of their collateral nature, we do so largely in footnotes (notes 13 and 14 and accompanying text).

I. BELATEDNESS OF FILING

The County's intervention petition was filed very late, and the reasons it gave for the delay (contained in its papers and not recounted here) do not rise to the level of ''good cause.'' Even if what the County says about the insufficiencies of *constructive* notice had merit, the County legislature's adoption of a resolution on the subject of the Millstone license renewals demonstrates that there was *actual* notice of those proposed renewals at a relatively early date. We are not necessarily unsympathetic to the problems inherent in the County's efforts, under a new administration, to launch its participation in an unfamiliar forum governed by specialized rules — but even with those handicaps, there was no good cause for such belatedness.

That does not, however, end our inquiry. Even under the old Rules of Practice, which were not as grammatically clear as the current ones, other factors listed in the regulations were to be weighed against the presence or absence of good cause. Notably, in the case in which that weighing process was enunciated, *the late-filing petitioner was a County that had sought to intervene 9 months late, without good cause — indeed, without* any *cause. The Commission allowed its intervention* (after two lower tribunals did not). *Nuclear Fuel Services, Inc.* (West Valley Reprocessing Plant), CLI-75-4, 1 NRC 273, *reversing* ALAB-263, 1 NRC 208 (1975) (*see also* the dissenting opinion of the Appeal Board Chairman, 1 NRC at 217), which had *affirmed* LBP-75-4, 1 NRC 89.

Under the current Rules, the need for balancing all the relevant factors (of which there are now more than there were in the old Rules) — regardless of the absence of good cause for the late filing — is made explicit, thus incorporating the Commission's *West Valley* interpretation. In turning to the current factors (10 C.F.R. § 2.309(c)(1)), we observe that their evaluation and weighting depends in no small measure on how an overriding conceptual analysis is performed.

Specifically, several of the factors will be seen to weigh *against* the County, *if* it is taken as a given that emergency planning may not ever be considered in

a license renewal proceeding. Under the assumption that emergency planning might be considered, however, they cut in the County's *favor.*

We decline to adopt the former approach *for purposes of our analysis of the factors.* Instead, for that limited purpose we think it better to presume — *without deciding* — that emergency planning might be a legitimate subject of consideration. *See* Tr. at 29. Adopting such a presumption for those limited purposes cannot, in the final analysis, be harmful to the interests of Dominion and the Staff. For while that presumption does indeed help the County on the ''factors'' evaluation (as well as on the ''contention pleading'' issue discussed in Part II below), *if Dominion and the Staff eventually prove correct on the jurisdictional matter, their position — that the County should be denied intervention — will prevail on that self-sufficient ground,* thereby mooting the (incorrectly premised) ''factors'' and ''pleading'' analyses (*see* p. 75, below). In contrast, if those two analyses are premised on *lack* of jurisdiction, the County's participation might be rejected on a ''factors'' analysis without ever *directly* reaching the jurisdictional question; that result, if it were later seen to be incorrect, would not be so readily remediated.

Under the approach outlined above, it is plain that the balance of the factors weighs heavily in the County's favor. Indeed, the Staff (and to a lesser extent Dominion) would appear to have no great quarrel with that result (if our premise were taken as the starting point).

A. Factors 2, 3, and 4

These three factors involve the nature of a petitioner's right to become a party, the nature and extent of its interest, and the possible effect of an order on that interest. Dominion's papers discuss these three factors together, urging that all three cut against the County — but only because Dominion believes that emergency planning cannot be a part of the proceeding (an argument that, once again, would be dispositive if we were willing to adopt that assumption). In contrast, the Staff considers these three factors to favor the County, in that the Staff is willing to concede (1) the County's standing, (2) the legitimacy — and indeed importance — of the County's interest in protecting its citizens, and (3) the impact of any possible orders on that County interest.

We find the Staff's analysis to be closer to the mark. The Rules of Practice long conferred a special status on *any* State and local governments that wished to participate in some fashion in the adjudicatory process (*see* 10 C.F.R. § 2.715(c) (former rules)); now those rules confer *automatic* full-participation standing on such governmental bodies *if* they have jurisdiction over the geographical area in which the reactor at issue is located (*see id.* § 2.309(d)(2)(i) (current rules)).

It is a very small step to rely on similar reasoning to *find* standing on behalf of a local government having jurisdiction over a geographical area admittedly

affected by reactor operations, with respect to an issue that stems precisely from those effects. The same concepts apply to the ''nature and extent'' of the County's interests under the third factor, and to the ''possible effect'' of any order on those interests. The sum of all three factors, then — standing, interest, and impact — strongly favors the County's petition.

B. Factor 5

The Staff appears to concede that there are no other means by which the County's interests will be protected (Feb. 28 Answer at 6), but Dominion trots out the venerable provisions of 10 C.F.R. § 2.206 (Feb. 28 Answer at 10). That regulation holds out the promise that those dissatisfied with Staff or Commission action can, outside of the adjudicatory process, file with the Staff a petition seeking the modification of an existing license.

The venerability of section 2.206 is also its undoing for present purposes. When Board members inquired at oral argument about its usefulness, it was virtually conceded that, as we suspected, the number of times that provision has been successfully invoked in the past 30 years can be counted on a very few fingers. *See* Tr. at 40-41, 49-50.[4]

To be sure, the infinitesimal section 2.206 success rate might simply reflect that the number of meritorious petitions filed over those several decades was indeed next to none, and that had petitions generally been better grounded, relief would have been granted in more instances. Whatever a careful, thorough historical analysis might show,[5] at this point we find no basis for treating, and do not recognize, section 2.206 as a practical ''other means'' available for protecting the County's interests within the meaning of the fifth factor in the regulatory criteria. In the absence of any other stated such means, this factor too, then, strongly favors the County, as the Staff recognizes.

C. Factor 6

Both the Staff and Dominion concede that the County's interests will not ''be represented by existing parties.'' Even if there were a *private* party currently pressing a similar contention (as the Connecticut Coalition Against Millstone organization tried unsuccessfully to do at an earlier stage herein), it would be difficult to ignore the County's overriding, paramount interest in — *and*

---

[4] *Compare* the analysis referred to in note 5, below.

[5] *See* ''The Regulatory Process for Nuclear Power Reactors, A Review,'' the August 1999 report of a diverse stakeholder panel assembled by the Center for Strategic and International Studies, at 51-53, regarding ''Petitions under 10 CFR 2.206.''

responsibility for — this particular subject and to assert that such an interest could be represented by any other entity. In any event, this factor strongly favors the County.

D. Factor 7

Both the Staff and Dominion argue that the County's participation will ''broaden the issues'' and ''delay the proceeding.'' This is true as far as it goes, but we question how much weight can be given this factor in a proceeding that was brought over a decade before the expiration of the first of the existing licenses, and in which the Staff's safety review is not due to be concluded for another several months.[6] At worst, this factor counts minimally against the County.

E. Factor 8

Based on the timing and content of the County's initial filing, both the Staff and Dominion urged that it could not ''reasonably be expected'' that the County's participation would ''assist in developing a sound record.'' Whatever might have been said about that appraisal at that time, its accuracy has since been undermined not only by the County's subsequent filings but by the sense of purpose demonstrated by the several members of the County's new executive team who were present during the conference call and whose commitment to participate and contribute was summarized by Chief Deputy County Executive Paul Sabatino II (Tr. at 86-88). Based on the later filings and the expressed oral and written commitments, we now are able to find that this factor also weighs heavily in the County's favor.

In sum, then, six of the seven factors count heavily in the County's favor, and are only minimally, if at all, offset by the other factor (concerns about delay) in the circumstances presented here. This result should not be surprising, for the balancing of the factors accurately reflects the underlying situation here, the upshot of which is this: *the County's showing on the seven factors is a strong one precisely because of its status as a local government and because of the nature of its contention.* Unlike the typical petitioner, the County is seeking to intervene

---

[6] Moreover, there might be serious due process concerns if it were always the case that the Staff and an applicant were allowed to take as long as the subject matter demanded to conduct their extra-judicial analyses, but that an intervenor's time to do its analogous work within the framework of the hearing were to be severely restrained. *See generally Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), as-yet-unpublished Final Partial Initial Decision (publicly-available version) (ADAMS Accession No. ML050620391), Feb. 24, 2005, at Appendix-5 to Appendix-8.

on a subject that it is not only expert in, but about which it is *required by its government role to take on a heavy responsibility in finding and implementing solutions.*

That a County in such a situation can have its unjustified belatedness excused — as was Erie County's in *West Valley* — does not establish an alarming precedent undercutting the rules for the benefit of all dilatory petitioners. Rather, it simply recognizes the different role and strengths that a local government can, in the public interest, bring to our proceedings.

II. ADEQUACY OF PLEADING

We need devote little time to this matter, in light of the questions on related subjects we address in Parts I and III. Perhaps the County could have drafted its first pleading, the actual intervention petition, in a manner that would have conformed more precisely to the outline of the governing regulation (10 C.F.R. § 2.309(f)(1)(i), (ii), (v), and (vi)).[7] But the substance sought after by that regulation was present. When considered in light of the quality and contribution of the County's later pleadings (i.e., its March 10 reply), the petition's complaints, objectives, and underpinnings are clear. At the same time, the County's focus has improved markedly as it gained familiarity with agency rules and procedures.[8] At this juncture, there is little question about what the County is seeking through its petition, and it is clear that the County has the expertise and commitment to address the subject fully and responsibly.

Moreover, in the final analysis *the subject at hand is one about which the County — more so than Dominion or the Staff — will be held to account by its populace if the need to activate the emergency plan ever arises.* The reasoning behind, and the purposes served by, the increased stringency of the agency's rules on pleading and supporting contentions — a history recited by Dominion and the Staff in an effort to have us reject the County's petition — are not undercut by our finding that, given its acknowledged crucial role and substantive expertise on the subject matter, the County's pleading was adequate for the matter it is seeking to present.

Put another way, there may be reasons to hold other prospective intervenors to a higher standard when applying the contention pleading rules to them, *in order to assure that they have made a serious commitment to the process, have come forward with a specific focus, and are capable of making — and prepared to make*

[7] The matters covered by subsections (iii) and (iv) of 10 C.F.R. § 2.309(f)(1) relate to the scope of the proceeding and thus are, by their nature, more properly subsumed in and resolved by the discussion in Part III, below.

[8] *See, e.g.,* the County's letter report of May 10, 2005.

— *a knowledgeable contribution on real issues,* elements that seem to underlie the periodic changes that have made those pleading rules increasingly stringent. *Cf.* 69 Fed. Reg. 2182, 2190 (Jan. 14, 2004). But, focusing here on the contribution the County might make through the adjudicatory route, there is no doubt in our minds, from the various presentations it has thus far made to us, that the County's position, commitment, and expertise have been clearly demonstrated through the totality of its written and oral presentations, both through legal counsel and through County officials.[9]

In sum, the contentions pleading rule provides us no basis for excluding the County from participation.[10] We turn, then, to whether the matter it wishes to bring before us is amenable to consideration in this type of proceeding.

III. REQUEST FOR JURISDICTIONAL EXEMPTION/WAIVER

The Commission's regulations, as well as a Commission decision issued at an earlier stage of this very proceeding, make it clear that questions of emergency planning are not ordinarily to be considered in connection with a nuclear utility's request for a renewal of its reactor operating license. 10 C.F.R. § 50.47(a)(1), and CLI-04-36, 60 NRC 631, 640 (2004).[11] That limitation flows from the underlying approach the Commission adopted long ago regarding such renewal requests, i.e., that only matters dealing with the aging of plant equipment are to be considered, and that emergency planning need not be considered, there being other ways to deal with ''changing demographics and other site-related factors'' such as ''transportation systems.'' *See* 56 Fed. Reg. 64,943, 64,967 (Dec. 13, 1991). As Dominion and the Staff see it, then, this matter is as simple a one as can ever be presented to a Licensing Board — they say we plainly have no jurisdiction over the set of contentions put forward by the County.

That position is what triggered the County's March 10 request for an exemption. As permitted by the Rules of Practice, the County has attempted to establish that

---

[9] *See* the Commission's discussion of the interests served by the ''strict contention rule'' in *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999), particularly the instruction that ''the rule helps to insure that full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions.'' By the totality of its presentations thus far, the County has demonstrated that it will contribute far more than that minimum here, if allowed to do so.

[10] We thus need not consider whether there would be an inherent unfairness in limiting the County to one drafting opportunity when applicants are regularly bestowed, both prior to and in the midst of the hearing process, many opportunities to amend their presentations. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-03-4, 57 NRC 69, 82 (2003), and Final Partial Initial Decision, Feb. 24, 2005 (*see* note 6, above), at Appendix-7 to Appendix-8, especially n.12.

[11] *See also Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 9-10 (2001).

its situation presents unusual circumstances that were not contemplated by the ''aging issues only'' regulation and that an exemption from that regulation is thus appropriate here under 10 C.F.R. § 2.335(b) (*see* Tr. at 70-76; *see also* Tr. at 86-89). Dominion and the Staff counter by arguing, in effect, that there are no special circumstances here and that we should simply apply the rule as written.

In fact, they say, we should have done so some time ago. Indeed, their papers at least hint at an assertion that we were in error for having suggested that settlement discussions — to be conducted during a period in which we had explained we were constrained by other (far higher priority) obligations from turning to this matter in any event — might serve the parties' and the public's interests. Their papers also seem to argue argue that, because they believe this matter should be dismissed for lack of jurisdiction, our urging the parties to conduct settlement negotiations contravened settled principles precluding Licensing Boards from attempting to direct the Staff in the performance of its nonadjudicatory regulatory functions.[12]

In the final analysis, while the County's exemption request is not an overpowering one, it has sufficient content to certify it to the Commission. Before explaining below why we come to that result, we cover in footnotes our rejection of the collateral positions taken by Dominion and the Staff, the first dealing with our jurisdiction to suggest settlement negotiations,[13] and the second with

---

[12] NRC Staff's Status Report, May 6, at 2; Dominion's Letter Report, May 6, at 2.

[13] We begin with the elemental notion that, although the parties were indeed *urging* that we had no jurisdiction, whether we have it or not is a question for us, not for them, to determine. Under basic jurisdictional concepts, a tribunal invariably has jurisdiction to determine whether it has jurisdiction. *United States v. Ruiz,* 536 U.S. 622, 628 (2002) (''a federal court always has jurisdiction to determine its own jurisdiction''); *see also United States v. United Mine Workers of America,* 330 U.S. 258, 290-92 (1947); 13A Charles A. Wright, Arthur R. Miller, & Edward H. Cooper, *Federal Practice and Procedure* § 3536, at 535 (2d ed. 1984) (''Jurisdiction to determine jurisdiction' refers to the power of a court to determine whether it has jurisdiction over the parties to and the subject matter of a suit. If the jurisdiction of a federal court is questioned, the court has the power and the duty, subject to review, to determine the jurisdictional issue.''). Accordingly, until we — not the parties — made that determination, we had adequate jurisdiction to proceed as we did.

Building on that foundation, we note that, even where it appears that a tribunal may ultimately be found to lack jurisdiction over a matter, we are aware of no principle that would preclude that tribunal, before addressing that question, from simply suggesting to the parties that there may be a way to settle their grievances by way of discussions among themselves. If the parties succeed in doing so in that circumstance, they could then include in their settlement agreement a provision that calls for the petitioner/claimant/plaintiff, as the case may be, simply to withdraw its initiating papers, leaving the tribunal with nothing to decide and thus no need ever to pass upon whether it had jurisdiction over the (settled) subject matter. We envisioned that a successful outcome to the settlement discussions would have led to a result of that nature here (*see* pp. 63-64, above).

(Continued)

whether that suggestion interfered with the Staff's performance of its regulatory obligations.[14]

Having done so, we can turn to the merits of the County's exemption request. We find that, although emergency planning issues are ordinarily and intentionally excluded from license renewal proceedings, the Long Island situation begs for some attention herein.

In the first place, the petitioning County is not located in the same State as the reactor, and thus the usual political forces and administrative relationships that might help the County draw attention to its concerns, outside the adjudicatory process, are not at work. Secondly, both in its papers and at the conference (*see* Tr. at 71-74, 86-89), the County has stressed matters — including population density (both permanent and vacation), forecasted changes therein, and geographical and roadway limitations — that all combine to make it appropriate for the Commission to consider the question whether the County's concerns are so unusual that they should be addressed in this license renewal process, even though generally such matters were explicitly excluded from the original rule's jurisdictional reach (*see* p. 70, above).[15]

In short, the parties' insistence on immediate dismissal was inappropriate at a phase of the proceeding in which, given our inability to turn to the matter, settlement discussions held some real promise and cost our decisionmaking process no real time. At the very least, those discussions were worthwhile in the sense that the matters that Dominion reports it presented to the County at the May 18 meeting (May 23 Letter Report at 2) appear to have served the public interest in commendable fashion.

[14] The license renewal proponents both make arguments to the apparent effect that, by urging settlement discussions, we were attempting to direct the Staff in the performance of its nonadjudicatory regulatory role. On that point, we are well aware of the strictures against our even contemplating the exercise of supervisory authority over the Staff; even unbidden, we have in other contexts called attention to those strictures. *See, e.g., Private Fuel Storage* (Independent Spent Fuel Storage Installation), Final Partial Initial Decision, Feb. 24, 2005 (*see* note 6, above), at Appendix-7.

In any event, it is beyond our understanding how the settlement suggestions we made here could possibly be interpreted as evincing any intention whatsoever to direct the Staff in how it performs its substantive emergency planning regulatory duties. Particularly since Dominion and the Staff had the absolute right to have ended the settlement discussions simply by advising us at any point that they did not want them to continue (*cf.* 10 C.F.R. § 2.338; *see also CFC Logistics, Inc.*, LBP-04-24, 60 NRC 475, 481 (2004)), it is difficult to imagine how anything we had said could have been understood to be ''directing'' the Staff to do anything.

To be sure, we had suggested that one possible approach to settlement could involve agreeing on a Memorandum of Understanding or similar approach defining future relationships. But how such an approach would be implemented, if it were even adopted, *was left entirely to the parties to discuss without any input whatsoever from us.*

[15] During the conference call, we did inquire as to whether there was a degree of sameness to all emergency plan controversies (Tr. at 72). But upon closer examination, the difficulties imposed by Long Island's population growth, geographical limitations, and roadway system, combine to make this situation a candidate for special treatment.

In that regard, the initial Millstone licensing process, like others, contemplated that a 40-year period would represent not only the anticipated dependable life of the plant's equipment, but also the foreseeable growth life of the plant's surroundings. In an appropriate case, the Commission should have the opportunity to determine whether to grant an exemption so that the growth of the external area could be given some consideration in the adjudicatory process, along with the aging of the internal equipment.

The situation is therefore a suitable one for the Commission to consider whether an exemption is appropriate. Alternatively, the Commission may simply choose to exercise *its* supervisory authority over the Staff to direct the Staff to interact with the County in a manner that would moot the adjudication.

In that connection, we would add that it is our view that the adjudicatory process may not be the best place for those units of local government *which are not opposed to a facility's existence but which genuinely wish to work on enhancing its safety* to hammer out their areas of disagreement with the Staff. This case is not the first time where it has appeared to Board members that a *more collaborative approach is in order* (*see* next paragraph, below). By this, however, we mean a true collaboration, not a ''relationship'' in which the Staff treats the local government's inquiries as little more than random ''citizen mail.'' *Cf.* Tr. at 79; *compare* NRC Staff's Status Report, May 6, at 2. The Commission, but not this Board, is empowered to ordain that result.

To elaborate, we believe it unfortunate that, so often, the NRC Staff on the one hand, and State and local governmental entities on the other, find themselves in an adversarial relationship with regard to the grant or denial of applications for licenses or amendments thereto. To be sure, such a relationship might be unavoidable in circumstances where, for some reason or another, the governmental body is unalterably opposed to construction or operation of the facility that is the subject of the application for an authorizing license. Thus, for example, Suffolk County's adamant opposition, many years ago, to the proposed Shoreham nuclear power facility necessarily could be addressed only in the context of an adjudicatory proceeding in which the competing views of the parties to the proceeding (including the NRC Staff) could be aired and considered by a Licensing Board.[16]

In a number of recent cases, however, we have seen participation by a State or local governmental body that is not raising objections to the very existence of a particular facility. Rather, its interest lies instead in ensuring that the activity that is contemplated by the license or license amendment application in question is

[16] For a brief recap of that history, *see, e.g.,* the background statement in *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-86-13, 24 NRC 22, 24-26 (1986).

conducted with due regard for the public health and safety and for the preservation of environmental values.

The matter before us provides one example of such a case. In sharp contrast to its historic opposition to the Shoreham facility, Suffolk County says it is not here seeking to preclude future Millstone operation through a denial of the requested operating license extensions. To the contrary, the County indicates, it is simply desirous of ensuring that its citizens will be adequately protected should there be a radiological accident at the facility.

Other relatively recent examples include the concerns voiced by the State of Oklahoma with regard to the decommissioning of certain NRC-licensed facilities within its borders on which radioactive material had accumulated. As with Suffolk County here, in those cases Oklahoma was doing no more than carrying out a clear governmental responsibility of taking whatever steps it deemed necessary to ensure that the health and safety of its citizens was not put at undue risk. See *FMRI, Inc.* [formerly *Fansteel, Inc.*] (Muskogee, Oklahoma Facility), LBP-04-8, 59 NRC 266 (2004), and *Sequoyah Fuels Corp.* (Gore, Oklahoma Site), LBP-04-30, 60 NRC 665 (2004).

As the Commission has emphasized and we have observed, it is not our role to superintend the manner in which the NRC Staff discharges its regulatory review functions. That said, we do not think that we exceed the bounds of our authority in expressing our view that the adjudicatory process might not be the best place for State and local governmental units such as Suffolk County in this case (and Oklahoma in the just-cited matters) to work out their differences with the Staff. In the final analysis, the ultimate responsibility and therefore objective of all governmental bodies — including the NRC — is necessarily the same: protection of the public health and safety and the environment. And, although there might well be room for reasonable differences of opinion as to what measures need to be undertaken to achieve that common goal, it seems quite clear to us that the goal could most efficiently and effectively be achieved not through butting heads in opposition in a hearing room, but rather through putting heads in combination in a conference room (or other nonadjudicatory setting).

We are, of course, not privy to the discussions that take place between the Staff on the one hand, and State and local governmental bodies on the other, with regard to license or license amendment applications that are of concern to the latter. In light, however, of the issues that ended up before a presiding officer in the *Fansteel* and *Sequoyah* cases, we entertain considerable doubt that a truly collaborative effort was undertaken. As we see it, given the common objective in both those cases, a satisfactory resolution of Oklahoma's concerns could and should have been reached without the need for litigation. Although we have no basis for laying blame there on anyone for the failure to obtain such resolution, the Staff's report of the outcome of the settlement negotiation we suggested in this case leaves at least some doubt as to the Staff's appreciation of the extent of

the correlative responsibility of State and local governments to ensure the health and safety of their citizens.

We conclude by emphasizing that our certification of the exemption request to the Commission should not be read as reflecting endorsement of the County's expansive views as to how far NRC review of emergency planning should reach geographically. The applicable regulations set those geographic bounds. The County is free to make its own plans for areas farther removed, but doing so is within its bailiwick, not the NRC's.

The matter thus comes down to this. In the absence of the Commission's granting an exemption or waiver from its general rule limiting the scope of license renewal proceedings, the emergency planning contentions the County wishes to litigate may not be entertained here. If the County fails to obtain the sought-after exemption/waiver, the matter must be dismissed. In that event, as already indicated (pp. 65-66, above), a retrospective look at the regulatory factors discussed in Part I might well result in a different balance, and certainly the County's intervention pleadings would run afoul of the two criteria in the contentions pleading rule (*see* Part II, note 7, above) that invoke jurisdictional notions.

IV. CONCLUSION

For the foregoing reasons, we hold that: (1) a balancing of the relevant factors set out in the agency's Rules of Practice justifies our entertaining the County's late-filed intervention petition; (2) given its purpose and its proponent, that petition's set of contentions is adequately pleaded; and (3) there is a colorable *prima facie* basis for the County's request for a waiver or exemption from the general jurisdictional rule (and the specific precedent herein) barring consideration of emergency plan issues in license renewal proceedings. In light of that third holding, we commend to the Commission's attention the County's waiver/exemption request.

This matter is accordingly and hereby CERTIFIED to the Commission under 10 C.F.R. § 2.335(d). The terms of that regulation make no provision for an appeal of this order; instead, the Commission may thereunder ''direct further proceedings as it considers appropriate to aid its determination.'' Of course, the certification's pendency, while halting any further action by *the Board* on the pending contentions, does not preclude *the parties* from resurrecting their settlement discussions in an effort to reach an arrangement amongst themselves that would avoid any need for this adjudication to continue.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Michael C. Farrar, Chairman
ADMINISTRATIVE JUDGE

Alan S. Rosenthal
ADMINISTRATIVE JUDGE

Peter S. Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 20, 2005

Copies of this Memorandum were sent this date by Internet e-mail transmission to counsel for Applicant Dominion, Petitioner County, and the NRC Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

E. Roy Hawkens, Presiding Officer
Dr. Richard F. Cole, Special Assistant
Dr. Robin Brett, Special Assistant

In the Matter of **Docket No. 40-8968-ML**
(ASLBP No. 95-706-01-ML)

HYDRO RESOURCES, INC.
(P.O. Box 777, Crownpoint,
New Mexico 87313) **July 20, 2005**

In this Decision, resolving the first category of challenges by multiple Intervenors to a license application by Hydro Resources, Inc. (HRI) to perform in situ leach (ISL) uranium mining at three sites in McKinley County, New Mexico, the Board finds that HRI has demonstrated by a preponderance of the evidence that the Intervenors' challenges relating to groundwater protection, groundwater restoration, and surety estimates do not provide a basis for invalidating HRI's license. The Board directs that the secondary groundwater restoration standard in HRI's license be revised, and also directs that HRI's Restoration Action Plan be revised to include a certain cost estimate.

RULES OF PRACTICE: LAW OF THE CASE

The ''law of the case'' doctrine, a common law rule applicable to NRC adjudicative proceedings, establishes that the decision of an appellate tribunal should ordinarily be followed in all subsequent phases of that case, provided that the particular question in issue was ''actually decided or decided by necessary implication.'' *Safety Light Corp.* (Bloomsburg Site Decontamination), CLI-92-9,

35 NRC 156, 159-60 & n.5 (1992). The doctrine is a rule of repose, designed to advance judicial efficiency and economy by refusing to revisit those issues that already have been decided.

RULES OF PRACTICE: LAW OF THE CASE

The law of the case doctrine merely guides a tribunal's discretion; it does not limit a tribunal's power. *Arizona v. California,* 460 U.S. 605, 618 (1983). The doctrine ''should not be applied woodenly in a way inconsistent with substantial justice.'' *United States v. Miller,* 822 F.2d 828, 832-33 (9th Cir. 1987).

RULES OF PRACTICE: LAW OF THE CASE

An adjudicative body should, in a proper exercise of discretion, refrain from applying the law of the case doctrine where ''changed circumstances or public interest factors dictate.'' *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-27, 61 NRC 145, 154 (2004) (internal quotation marks omitted). Changed circumstances include a situation where, for example, intervening controlling authority makes reconsideration appropriate, or substantially different evidence is adduced at a subsequent stage of the proceeding. *See, e.g., In re Rainbow Magazine, Inc.,* 77 F.3d 278, 281 (9th Cir. 1996); *DeLong Equipment Co. v. Washington Mills Electro Minerals Corp.,* 990 F.2d 1186, 1196-97 (11th Cir. 1993); *United States v. Bell,* 998 F.2d 247, 251 (1st Cir. 1993); *Lyons v. Fisher,* 888 F.2d 1071, 1075 (5th Cir. 1989), *cert. denied,* 495 U.S. 948 (1990).

RULES OF PRACTICE: CASE OR CONTROVERSY

It is well established that, absent compelling reasons, the Commission adheres to the ''case'' or ''controversy'' doctrine in its adjudicatory proceedings. *See Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station), CLI-93-10, 37 NRC 192, 200 n.28 (1993).

RULES OF PRACTICE: CASE OR CONTROVERSY

Pursuant to the case or controversy doctrine, a justiciable controversy must involve adverse parties representing a true clash of interests. The questions raised must be ''presented in an adversary context and in a form historically viewed as capable of resolution through the judicial process.'' *Flast v. Cohen,* 392 U.S. 83, 95 (1968).

RULES OF PRACTICE: CASE OR CONTROVERSY

When, during the course of a proceeding, the parties no longer disagree about the appropriateness of a requested remedy, the question of whether that remedy should be awarded no longer represents a live controversy involving a true clash of interests. Under such circumstances, a licensing board should ordinarily refrain from adjudicating questions underlying whether that remedy should be granted. *Cf. Moore v. Charlotte-Mecklenburg Board of Education,* 402 U.S. 47, 48 (1971) (*per curiam*).

ATOMIC ENERGY ACT (AEA): HEARING RIGHTS

It is axiomatic that an intervenor should receive a ''meaningful hearing opportunity on all substantive issues material to the agency's licensing decision.'' *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-00-8, 51 NRC 227, 240 (2000). But this principle does not automatically render certain post-hearing determinations improper. The pertinent inquiry is whether the methodology for making these determinations is sufficiently detailed and prescriptive so that, assuming compliance with that methodology, the Commission has ''reasonable assurance'' that these determinations will not endanger public health and safety. 10 C.F.R. § 2.104(c)(3); *see Consolidated Edison Co. of New York* (Indian Point, Unit 2), CLI-74-23, 7 AEC 947, 952 (1974); *see also Union of Concerned Scientists v. NRC,* 735 F.2d 1437, 1449 (D.C. Cir. 1984) (''Congress did not mean to require a hearing [under the AEA] where a hearing serves no purpose''); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-03-8, 58 NRC 11, 20 & n.25 (2003) (verification by the NRC Staff that a licensee complies with preapproved design or testing criteria ''is a highly technical inquiry not particularly suitable for hearing'').

ATOMIC ENERGY ACT (AEA): HEARING RIGHTS

An intervenor may not legitimately claim that a licensee's ability to make post-hearing determinations deprives the intervenor of its hearing rights by merely conjecturing that the licensee might violate prescribed procedures. The Commission has ''long declined to assume that licensees will refuse to meet their obligations under their licenses and our regulations'' (*Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-03-2, 57 NRC 19, 29 (2003)).

RULES OF PRACTICE: WAIVER OF UNDEVELOPED ARGUMENTS

The relevant regulation requires an intervenor to submit a written presentation that ''describe[s] in detail any deficiency or omission in the license application, with . . . a detailed statement of reasons why any particular sections or portion is deficient.'' 10 C.F.R. § 2.1233(c).

RULES OF PRACTICE: WAIVER OF UNDEVELOPED ARGUMENTS

Arguments that an intervenor fails — in derogation of section 2.1233(c) — to raise or develop in its written presentation will be treated as waived for several reasons. First, an intervenor's failure to raise an argument in its written presentation deprives other parties of a fair opportunity to discern and attempt to rebut that argument. *See Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), ALAB-843, 24 NRC 200, 204 (1986). Second, the function of the Presiding Officer of a Licensing Board is to be an impartial arbiter of the challenges raised by an intervenor, and the integrity of this function would be undermined if the Presiding Officer were required to search the record for evidence to construct and develop an intervenor's arguments. *See, e.g., Williams v. Eastside Lumberyard and Supply Co.,* 190 F. Supp. 2d 1104, 1114 (S.D. Ill. 2001). Finally, judicial economy and efficiency are promoted by a rule that relieves the Licensing Board from the task of searching for an intervenor's arguments by ''dig[ging] through the reams of paper which [it has] deposited . . . , particularly [when the Intervenor] did not consider the [arguments] sufficiently important to raise [them] in [its written presentation].'' *Dahlberg v. Avis Rent A Car System, Inc.,* 92 F. Supp. 2d 1091, 1110 (D. Col. 2000).

PARTIAL INITIAL DECISION

(Phase II Challenges to In Situ Leach Mining Materials License Regarding Groundwater Protection, Groundwater Restoration, and Surety Estimates)

I. INTRODUCTION

This protracted proceeding involves challenges by multiple Intervenors to a license application by Hydro Resources, Inc. (HRI) to perform in situ leach (ISL) uranium mining. On January 5, 1998, while the Intervenors' challenges were pending, the NRC Staff granted the license, SUA-1508, which authorizes HRI — after several preliminary requirements are satisfied — to perform ISL uranium

mining at the following four sites in McKinley County, New Mexico: Section 8 and Section 17 in Church Rock, and Crownpoint and Unit 1 in Crownpoint.

Although HRI has held this license for nearly 8 years, it has not yet started mining at any of the sites, due, at least in part, to profitability concerns related to the fluctuating price of uranium. Notwithstanding HRI's tardigrade pace in commencing mining operations, this adjudication has gone forward, focusing first — in what was characterized as Phase I — on issues specific to Section 8, because HRI represented that it ultimately would begin its mining operations there.

In February 2004, the then-Presiding Officer completed adjudicating the Phase I challenges to HRI's license relating to prospective mining operations at Section 8, *see Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), LBP-04-3, 59 NRC 84 (2004), and the Commission sustained the validity of that aspect of HRI's license. *See id.,* CLI-04-33, 60 NRC 581 (2004).

What remains to be adjudicated in Phase II are the challenges to HRI's license insofar as it authorizes mining at the other three sites — Section 17, Crownpoint, and Unit 1. For litigative efficiency, the remaining challenges were grouped into the following four categories: (1) groundwater protection, groundwater restoration, and surety estimates; (2) historic preservation; (3) air emission controls; and (4) adequacy of environmental impact statement.

This decision resolves the issues embodied in the first category of challenges. For the reasons set forth below, I find — with the concurrence of Dr. Richard Cole and Dr. Robin Brett, who have been appointed Special Assistants — that HRI has demonstrated by a preponderance of the evidence that the Intervenors' challenges relating to groundwater protection, groundwater restoration, and surety estimates do not provide a basis for invalidating HRI's license to perform ISL uranium mining at Section 17, Crownpoint, and Unit 1. However, I direct that (1) HRI's license be revised to reduce the secondary groundwater restoration standard for uranium from 0.44 mg/L to 0.03 mg/L, and (2) HRI's Restoration Action Plan be revised to include a cost estimate for expenses associated with disposal site unloading, surveying, and decontamination.

II. BACKGROUND

A. A General Description of the ISL Mining Authorized by HRI's License

HRI's materials license authorizes it to perform ISL uranium mining at four proximately clustered sites in McKinley County, New Mexico: Section 8 and Section 17 in Church Rock, and Crownpoint and Unit 1 in Crownpoint. The targeted mining zone will be discrete portions of an expansive aquifer, called the Westwater Aquifer, that underlies the entire region. The Westwater Aquifer ranges in thickness from Gallup, New Mexico, to the continental divide between

175 and 275 feet, but it is known to be considerably thicker locally. *See* NUREG-1508, ''Final Environmental Impact Statement To Construct and Operate the Crownpoint Uranium Solution Mining Project, Crownpoint, New Mexico,'' at 3-8 (Feb. 1997) [hereinafter FEIS]. In the Church Rock area, the top of the Westwater Aquifer ranges in depth from 460 to 760 feet; in the Crownpoint area, the top of the Westwater Aquifer is at an average depth of about 1840 feet. *See* FEIS at xix.

At the Section 8 mining site (and allegedly at the other three sites as well), the Westwater Aquifer is sandwiched between two aquitards, which are containing layers that confine the flow of water in the Westwater Aquifer from overlying and underlying aquifers. The Brushy Basin Aquitard lies above the Westwater Aquifer and separates it from the overlying Dakota Aquifer. The Recapture Aquitard lies below the Westwater Aquifer and separates it from the underlying Cow Springs Aquifer. *See Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), LBP-99-30, 50 NRC 77, 89-91 (1999); FEIS at 3-7 to 3-11; Affidavit of Frank Lee Lichnovsky at 5-6 (Apr. 21, 2005) [hereinafter Lichnovsky Affidavit].

The portion of the Westwater Aquifer that will be mined pursuant to HRI's license is extremely small compared to the overall size of the aquifer. For example, assuming that the Westwater underlies 50% of McKinley County, it encompasses 1,742,080 acres there. San Juan County is down-gradient of HRI's mining sites, and if the Westwater acreage in San Juan County is included in this example, that would increase the relevant regional area of the aquifer by 3,530,240 acres. In contrast, HRI's well fields, when fully developed at all four sites, will encompass only about 435 acres. The alleged significance of this comparison is that — given the Westwater's demonstrated capacity to precipitate uranium — it may reasonably be concluded that the Westwater's regional reducing capability will contribute to the attenuation of any small pockets of residual uranium that may remain in solution after HRI's mining operations and groundwater cleanup efforts are complete. Affidavit of Mark S. Pelizza at 30 (Apr. 21, 2005) [hereinafter Pelizza Affidavit]; *see* LBP-99-30, 50 NRC at 102; Lichnovsky Affidavit at 17-18; FEIS at 3-6 to 3-9.

HRI's ISL uranium mining will involve two principal steps. During the first step (the injection process), HRI will inject a leach solution called ''lixiviant'' — which is a mixture of groundwater that is charged with oxygen and bicarbonate — through wells into a targeted zone containing uranium oxide. The uranium oxide, which is in solid form and is immobile because it is attached to a host rock, dissolves when it comes into contact with the lixiviant solution. *See* FEIS at 2-2, 2-5.

Near the injection wells, HRI also will operate production wells located in a pattern around the individual injection wells. The production wells create a negative pressure, or ''cone of depression,'' in the mined region by withdrawing

slightly more water from the ground than is injected, thus containing the horizontal spread of the pregnant lixiviant (i.e., the lixiviant that now contains dissolved uranium oxide) and causing it to flow toward the production wells where it is pumped to the surface. *See* FEIS at 2-2 to 2-3.[1]

The second step of the ISL mining operation (the extraction process) occurs after the pregnant lixivant is pumped to the surface. HRI will pipe the pregnant lixiviant through columns of ion exchange resin, the uranium oxide will attach to the resin, and the now-barren lixiviant will then be recharged and reinjected into the mining zone. When the ion exchange capacity of a column of resin is depleted, that column is taken offline and a chemical process is used to strip the uranium oxide from the resin. The resulting slurry is filtered and dried to produce the finished product — uranium oxide concentrate, or yellowcake — which is packaged and stored for final shipment. *See* FEIS at 2-6 to 2-12.

After HRI completes mining at a site, it is required to return groundwater parameters in the Westwater Aquifer to the average premining baseline conditions of the mine field. This is accomplished by repeatedly flushing the affected groundwater with noncontaminated groundwater, followed by treatment and/or disposal of the contaminated groundwater. If HRI is unable to achieve the primary groundwater restoration goal for a particular parameter, the secondary groundwater restoration goal is to return water quality to the maximum concentration limit specified in the United States Environmental Protection Agency (EPA) drinking water regulations or, for certain parameters, to New Mexico or NRC standards. *See* LC 10.21; FEIS at 2-16 to 2-18, 2-20, A-36 to A-38.

The NRC Staff determined that groundwater restoration would require flushing the mined sites with 9 ''pore volumes,'' and the Commission affirmed this determination as applicable to the Section 8 site. *See Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-00-8, 51 NRC 227, 244-45 (2000). A pore volume is not a fixed unit; rather, HRI calculates a pore volume by multiplying the mine's well field area by the ore zone thickness and the porosity of the rock. The result is then converted to gallons. Additionally, to account for lixiviant that may have ''flared,'' or migrated outside the boundaries of the calculated ore pore volume, lateral and vertical ''flare factors'' are used as further multipliers. *See* CLI-04-33, 60 NRC at 589 n.32.

---

[1] HRI will encircle the well field with monitor wells to detect any horizontal excursions of lixiviant outside the cone of depression. *See* License Condition (LC) 10.17. HRI will also install monitor wells to check for vertical excursions outside the Westwater Aquifer. *See* LC 10.18 to LC 10.20. An excursion requires immediate corrective action to draw the lixiviant back to the cone of depression; if the corrective action is unsuccessful, HRI must terminate injection of lixiviant within that well field, or increase the surety above the amount originally contemplated in the Restoration Action Plan to compensate for the increase in restoration cost caused by the excursion. *See* LC 10.13; Crownpoint Uranium Project Consolidated Operations Plan (Rev. 2.0) § 8.7 (Aug. 15, 1997) [hereinafter Consolidated Operations Plan].

Before HRI may inject lixiviant at Section 17, Crownpoint, or Unit 1, it must submit to the NRC for approval the ''results of a groundwater restoration demonstration conducted at the [Section 8] site. The demonstration shall be conducted on a large enough scale, acceptable to the NRC, to determine the number of pore volumes that shall be required to restore a production-scale well field'' (LC 10.28; *see also* LBP-04-3, 59 NRC at 96). The ''Section 8 production well field demonstration [will] give . . . the absolute best information'' to make any necessary adjustments to the number of pore volumes required for groundwater restoration at the other sites (LBP-04-3, 59 NRC at 95; *see also id.* at 93-94 n.46). ''If the demonstration results confirm the [9 pore volume] estimate, no revision to the pore volume estimate will be necessary. Conversely, if HRI is unable to successfully complete the restoration demonstration using up to 9 pore volumes, it 'can't use that same number [as the estimate] for the remaining sites' '' (CLI-04-33, 60 NRC at 593).

After concluding the groundwater restoration process, the ISL mining wells will be plugged, processing facilities will be decontaminated, all contaminated materials will be removed to a licensed waste disposal site, and all affected areas will be surveyed, recontoured and revegetated, and released for unrestricted use (FEIS at xx).

B. Summary of the Relevant Administrative Proceedings in this Case

1. Phase I

This proceeding — which is being litigated pursuant to the NRC's since-superseded procedural rules in 10 C.F.R. Part 2, Subpart L[2] — involves challenges by the Eastern Navajo Diné Against Uranium Mining, the Southwest Research and Information Center, Grace Sam, and Marilyn Morris [hereinafter referred to collectively as the Intervenors] to HRI's application for a 10 C.F.R. Part 40 source and byproduct materials license, which the NRC Staff issued to HRI on January 5, 1998 (SUA-1508). The license authorizes HRI to perform ISL uranium mining at four sites in McKinley County, New Mexico: Sections 8 and 17 in Church Rock, and Crownpoint and Unit 1 in Crownpoint. *See Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), LBP-98-9, 47 NRC 261 (1998).

HRI plans to commence its ISL mining operations at Section 8, and it must successfully demonstrate groundwater restoration at that site before it starts

[2] In 2004, the NRC amended its adjudicatory procedural rules in 10 C.F.R. Part 2. *See* 69 Fed. Reg. 2182 (Jan. 14, 2004). Because the new rules apply only to proceedings noticed on or after February 13, 2004, they have not been applied here.

mining the other sites. It anticipates that the operation and restoration of Section 8 will last about 5 1/2 years. *See id.,* CLI-98-8, 47 NRC 314, 318-19 (1998).

However, HRI has not yet commenced mining operations at Section 8 (or elsewhere), apparently due, at least in part, to profitability concerns. Moreover, HRI must obtain additional regulatory agency permits before it begins mining. *See Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-04-14, 59 NRC 250, 253-54 (2004); *id.,* CLI-01-4, 53 NRC 31, 42 (2001); LBP-04-3, 59 NRC at 109-10 n.154 (Licensing Board observes that HRI must obtain other regulatory agency permits before it may begin mining and ''it is far from certain'' that HRI will be successful in obtaining such permits).

HRI thus does not know when it will begin mining at Section 8, and it has no immediate intent to mine the other three sites. *See* CLI-01-4, 53 NRC at 36; CLI-00-8, 51 NRC at 242.

The Commission has held, however, that HRI's uncertainty as to when it will commence mining operations does not abridge the Intervenors' right to timely litigate their challenges to HRI's license. *See* CLI-01-4, 53 NRC at 38-44. Given HRI's stated intent to begin its mining operations at Section 8, the then-Presiding Officer — pursuant to HRI's request — bifurcated the litigation, focusing initially in Phase I on the Intervenors' challenges relating to Section 8 and the overall validity of the license, leaving those issues relating specifically to Section 17, Unit 1, and Crownpoint open and subject to later litigation in Phase II. *See id.* at 40 (''[i]t is sensible to decide the most time-sensitive issues first, as the Presiding Officer did here when he examined Section 8-related issues initially'').

The litigation in this case not only has been lengthy, it has been — in the words of the Commission — ''formidable'' and ''complex, due both to its large number of technical issues and to unprecedented legal questions'' *id.* at 34, 43; *see also id.* at 39 (''[t]he case record is voluminous, the legal and technical arguments multifaceted and difficult'')).

By 2001, the Commission already had issued several appellate decisions relating to the Section 8 proceeding. *See, e.g.,* CLI-01-4, 53 NRC 31 (National Environmental Policy Act and environmental justice concerns); *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-00-12, 52 NRC 1 (2000) (groundwater, radioactive air emissions, and technical qualifications); CLI-00-8, 51 NRC 227 (financial qualifications).

In 2001, this proceeding was held in abeyance for about 2 years while the parties attempted to negotiate a settlement. Unfortunately, their efforts were unsuccessful, and active litigation resumed in 2003. *See* CLI-04-33, 60 NRC at 583.

In February 2004, the then-Presiding Officer completed adjudicating the Phase I issues relating to Section 8, *see* LBP-04-3, 59 NRC 84, and the Commission, on appeal, sustained the validity of HRI's license insofar as it involves prospective mining operations at Section 8. *See* CLI-04-33, 60 NRC 581 (groundwater and

surety issues); *see also Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-04-39, 60 NRC 657 (2004) (denying petition for review of Presiding Officer's denial of Intervenors' motions to supplement final environmental impact statement for Sections 8 and 17).

2. Phase II

The Intervenors' contentions in Phase II of this case challenge the validity of HRI's license insofar as it authorizes mining at the other three sites — Section 17, Crownpoint, and Unit 1. For litigative efficiency, the Intervenors' challenges were grouped into the following four categories: (1) groundwater protection, groundwater restoration, and surety estimates; (2) historic preservation; (3) air emission controls; and (4) adequacy of environmental impact statement.

The instant decision — which is based on full briefing by the parties and a voluminous record — resolves the first category of challenges (i.e., groundwater protection and restoration, and surety estimates) to HRI's license authorizing ISL mining at Section 17, Crownpoint, and Unit 1.

The Intervenors assert that HRI's license authorizing ISL uranium mining at Section 17, Crownpoint, and Unit 1 is invalid because: (1) the licensing condition establishing the secondary groundwater restoration standard for uranium is unlawfully high and must be reduced from 0.44 mg/L to 0.03 mg/L; (2) several licensing conditions that permit HRI to make particular groundwater-related determinations after the completion of this proceeding deprive the Intervenors of their hearing rights; (3) HRI's groundwater restoration plan and its cost estimates in the Restoration Action Plan are inadequate; and (4) HRI fails to establish that drinking water supplies will be protected from unlawful uranium contamination. The Intervenors therefore ask that HRI's license be invalidated or, alternatively, that it be revised to cure the allegedly invalid provisions. *See* Intervenors' Written Presentation in Opposition to Hydro Resources, Inc.'s Application for a Materials License with Respect to Groundwater Protection, Groundwater Restoration, and Surety Estimates (Mar. 7, 2005) [hereinafter Intervenors' Written Presentation].

HRI and the NRC Staff have submitted written presentations addressing the Intervenors' challenges and arguing that HRI's license need not be invalidated. *See* HRI's Response in Opposition to Intervenors' Written Presentation (Apr. 21, 2005) [hereinafter HRI's Response]; NRC Staff's Written Presentation on Groundwater Protection, Groundwater Restoration, and Surety Estimates at 6-8 (Apr. 29, 2005) [hereinafter NRC Staff's Written Presentation].

For the reasons discussed below, I conclude that HRI has met its burden of demonstrating by a preponderance of the evidence that its license need not be invalidated. However, I direct that the secondary groundwater restoration standard for uranium in HRI's license be reduced consistent with the Intervenors' request, and I direct that HRI's Restoration Action Plan be revised to include a

cost estimate for expenses associated with disposal site unloading, surveying, and decontamination.

III. ANALYSIS

Introduction: The Applicability of the ''Law of the Case'' Doctrine in This Proceeding

The NRC Staff correctly observes that the Intervenors' challenges must be considered against the backdrop of the ''law of the case'' doctrine. *See* NRC Staff's Written Presentation at 6-8. The ''law of the case'' doctrine, which is a common law rule applicable to NRC adjudicative proceedings, establishes that the decision of an appellate tribunal should ordinarily be followed in all subsequent phases of that case, provided that the particular question in issue was ''actually decided or decided by necessary implication'' (*Safety Light Corp.* (Bloomsburg Site Decontamination), CLI-92-9, 35 NRC 156, 159-60 & n.5 (1992)). It is a rule of repose, designed to advance judicial efficiency and economy by refusing to revisit those issues that already have been decided.[3]

The law of the case doctrine may be implicated here, because the Commission already has issued several decisions that contain factual determinations and legal conclusions pertaining to groundwater protection, groundwater restoration, and surety estimates as they apply to HRI's prospective mining operations at Section 8 (*see supra* Part II.B.1). To the extent that the Intervenors are unable to distinguish their current challenges from those that were previously rejected by the Commission, the law of the case doctrine will militate strongly in favor of adhering to those decisions.

It bears emphasizing, however, that the law of the case doctrine merely guides a tribunal's discretion; it does not limit a tribunal's power (*Arizona v. California,* 460 U.S. 605, 618 (1983)), and it ''should not be applied woodenly in a way inconsistent with substantial justice'' (*United States v. Miller,* 822 F.2d 828, 832-33 (9th Cir. 1987)). Thus, an adjudicative body should, in a proper exercise of discretion, refrain from applying law of the case doctrine where ''changed circumstances or public interest factors dictate'' (*Private Fuel*

[3] HRI argues that a different rule of repose — collateral estoppel — bars the Intervenors from advancing arguments that were previously rejected. *See* HRI's Response at 9. But collateral estoppel is a rule that applies in situations involving *different* proceedings. Specifically, it bars relitigation in a subsequent proceeding of issues of law or fact that have been adjudicated in an earlier, *different* proceeding. *See Ohio Edison Co.* (Perry Nuclear Power Plant, Unit 1), LBP-92-32, 36 NRC 269, 284-85 (1992). Collateral estoppel is not apposite here, because the earlier adjudication of the Intervenors' challenges did not occur in a different proceeding; it occurred in a prior phase of the same proceeding.

Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-04-27, 61 NRC 145, 154 (2004) (internal quotation marks omitted)). Changed circumstances include a situation where, for example, intervening controlling authority makes reconsideration appropriate, or substantially different evidence is adduced at a subsequent stage of the proceeding. *See, e.g., In re Rainbow Magazine, Inc.,* 77 F.3d 278, 281 (9th Cir. 1996); *DeLong Equipment Co. v. Washington Mills Electro Minerals Corp.,* 990 F.2d 1186, 1196-97 (11th Cir. 1993); *United States v. Bell,* 988 F.2d 247, 251 (1st Cir. 1993); *Lyons v. Fisher,* 888 F.2d 1071, 1075 (5th Cir. 1989), *cert. denied,* 495 U.S. 948 (1990).

With the above ''law of the case'' considerations in mind, I now turn to the Intervenors' challenges.[4]

A. The Intervenors' Challenge to HRI's Secondary Groundwater Restoration Standard for Uranium Need Not Be Adjudicated, Because Both HRI and the NRC Staff Agree That the Standard Should Be Reduced from 0.44 mg/L to 0.03 mg/L

As discussed *supra* Part II.A, during the ISL uranium mining process, (1) HRI will introduce a lixiviant solution into the groundwater in a targeted mining zone, (2) the lixiviant solution will dissolve uranium oxide in the mining zone, and (3) HRI will pump the pregnant lixiviant solution (the solution containing the dissolved uranium oxide) from the ground and extract the uranium oxide. After HRI completes its mining operations at a site, it must remediate the affected area, which, as relevant here, requires HRI to restore the groundwater to levels consistent with restoration goals established in its license.

---

[4] Consistent with a briefing order in this case dated February 3, 2005 (unpublished), the Intervenors filed their brief for this portion of the proceeding on March 7, 2005, and HRI and the Staff filed their responsive briefs on April 21, 2005, and May 2, 2005, respectively. Although the February scheduling order did not provide that the Intervenors could file a reply brief, they filed such a brief on May 9, 2005, responding narrowly and specifically to the preclusion arguments advanced by HRI and the Staff. Neither HRI nor the Staff objected to this filing, and it is appropriate in this case to allow this reply brief to be filed, especially in light of an unpublished scheduling order dated May 25, 2001, that authorized the Intervenors to file reply briefs limited to such preclusion issues. *Cf. Alabama Power Co.* (Joseph M. Farley Nuclear Plant, Units 1 and 2), ALAB-182, 7 AEC 210, 218 (1974) (a party must be accorded a meaningful opportunity to respond to arguments that are in the nature of affirmative defenses).

In their reply brief, the Intervenors — in addition to opposing the preclusion arguments on the merits — assert that these arguments should be stricken, because HRI and the Staff failed to comply with a procedural requirement in the unpublished scheduling order of May 25, 2001, that required them to provide the Intervenors with advance notice if they intended to raise such arguments. *See* Intervenors' Reply Brief at 5 n.2. Because the Intervenors' reply brief has been accepted for filing, they have suffered no prejudice; their request to strike the preclusion arguments is therefore denied.

Specifically, HRI will establish groundwater restoration goals on a parameter-by-parameter basis, with the primary restoration goal to return each parameter to the average well field concentration that existed prior to the commencement of mining operations, or the baseline. If that goal cannot be achieved, the secondary restoration goal is to return water quality to the maximum concentration limit specified in the United States Environmental Protection Agency (EPA) drinking water regulations or, for certain parameters, to New Mexico or NRC standards. The license condition establishing the primary and secondary groundwater restoration goals states in pertinent part (LC 10.21(A) (emphasis added)):

> Groundwater restoration goals shall be established on a parameter-by-parameter basis, with the primary restoration goal to return all parameters to average pre-lixiviant injection conditions. *If groundwater quality parameters cannot be returned to average pre-lixiviant injection levels, the secondary goal shall be to return groundwater quality to the maximum concentration limits as specified in the U.S. [EPA] secondary and primary drinking water regulations. The secondary restoration goal for barium and fluoride shall be set to the State of New Mexico primary drinking water standard. The secondary restoration goal for uranium shall be 0.44 mg/L . . . .*

When the Staff issued HRI's license in 1998, the EPA did not have a maximum concentration limit (MCL) for uranium. Therefore, in selecting a secondary restoration goal, the Staff chose 0.44 mg/L from the effluent concentration limits of Table 2 of Appendix B of 10 C.F.R. Part 20. *See* FEIS at 2-20.

After the Staff issued HRI's license, the EPA — pursuant to its authority under the Safe Drinking Water Act (SDWA) — promulgated an MCL for uranium of 0.03 mg/L. *See* 65 Fed. Reg. 76,708 (Dec. 7, 2000) (effective Dec. 8, 2003). The EPA concluded that drinking water that contained more than 0.03 mg/L of uranium would, *inter alia,* pose an unacceptable threat of kidney damage due to uranium's *chemical* toxicity (*id.* at 76,710-15). The Intervenors assert that the secondary restoration standard for uranium must be reduced from 0.44 mg/L to 0.03 mg/L, else HRI's license will violate the SDWA (Intervenors' Written Presentation at 22, 31, 33).

The Intervenors also argue that the current secondary restoration standard for uranium in HRI's license violates the Atomic Energy Act (AEA), which provides that the Commission ''shall not'' issue a license that ''would be inimical to the . . . health and safety of the public'' (42 U.S.C. § 2099). Allowing HRI to exceed the EPA's MCL for uranium would endanger the public health and safety, argue the Intervenors, because the overwhelming weight of recent epidemiological studies establishes that chronic ingestion of even low levels of uranium can — due to its chemical toxicity — cause kidney damage and eventual kidney failure (Intervenors' Written Presentation at 25, 33, 34).

HRI and the NRC Staff disagree with the Intervenors' assertion that the secondary groundwater restoration standard for uranium in HRI's license violates the SDWA and the AEA. HRI and the Staff base their argument on the fact that HRI's license requires that — prior to mining — HRI obtain other administrative authorizations that will ensure its conduct is consistent with the health and safety standards established in the SDWA and the AEA. Specifically, HRI may not commence ISL mining operations at any site until it obtains (1) an aquifer exemption for the portion of the aquifer where HRI will be mining, and (2) an Underground Injection Control (UIC) permit. *See* LC 9.14 (''[p]rior to injection of lixiviant, the licensee shall obtain all necessary permits and licenses from the appropriate regulatory authorities''). A valid aquifer exemption, once obtained, would exempt HRI from adhering to EPA's prescribed MCLs for underground sources of drinking water, because exempted aquifers, by definition, will not likely be used as a future drinking source after ISL operations are complete. *See* 40 C.F.R. § 146.4.[5]

HRI and the Staff thus argue that if HRI's application for an aquifer exemption is denied, it will not be permitted to engage in ISL mining; if its application is approved, the EPA MCL for uranium will not apply. In no event, therefore, will HRI be violating the SDWA or taking action inimical to the public health and safety. Under these circumstances, they argue, the Intervenors' request to reduce the secondary groundwater restoration standard for uranium from 0.44 mg/L to 0.03 mg/L is a matter that need not be decided in this proceeding. *See* HRI's Response at 15-16; NRC Staff's Written Presentation at 23-24.[6]

I agree with HRI and the Staff that the Intervenors' argument concerning the validity of the secondary groundwater restoration standard for uranium is a matter

---

[5] Pursuant to the SDWA, an organization must obtain a UIC permit from the EPA or its authorized designee before engaging in ISL uranium mining. *See* 42 U.S.C. § 300f; 40 C.F.R. § 144.6. The UIC Program prohibits ISL uranium mining in aquifers that meet the definition of an ''underground source of drinking water,'' absent an aquifer exemption (40 C.F.R. § 144.7). To obtain an aquifer exemption, the applicant must demonstrate that a localized portion of an aquifer (e.g., a discrete area containing a high concentration of uranium which renders that portion of the aquifer unsuitable as a drinking water source) is not an ''underground source of drinking water.'' The UIC Program and its process for obtaining an aquifer exemption thus ensure aquifer protection consistent with SDWA standards.

The EPA has authorized the State of New Mexico to implement the UIC Program on non-Native American lands in New Mexico; the EPA implements the UIC Program on Native American lands. *See* 40 C.F.R. § 144.3; FEIS at 1-5. Which entity will administer the UIC Program for HRI's mining sites is beyond the scope of this proceeding. *Cf.* FEIS at 1-5 (''[c]urrently, there are disputes over the jurisdictional status of some of the [HRI] project area''); *HRI, Inc. v. EPA,* 198 F.3d 1224, 1249 (10th Cir. 2000) (holding that Section 17 qualifies as Native American land, but a legitimate dispute exists as to whether Section 8 qualifies as Native American land).

[6] The Staff also argues that, although it may look to EPA standards for guidance, it is not bound by the strictures of the SDWA when exercising its regulatory authority in the field of ISL uranium mining. *See* NRC Staff's Written Presentation at 20.

that need not be adjudicated here. My decision, however, is not grounded on the notion that the requirement of obtaining an aquifer exemption absolves HRI from demonstrating the legitimacy of the standard in this proceeding (*supra* note 5 and accompanying text). Nor is my decision grounded on the Staff's assertion that it is not bound by the SDWA (*supra* note 6).

Rather, I decline to decide the legitimacy of the secondary groundwater restoration standard for uranium in HRI's license because HRI and the Staff — despite disagreeing with the Intervenors' legal theory underlying their request to reduce that standard — do not object to reducing that standard. To the contrary, they agree that reducing the standard to 0.03 mg/L is appropriate, because such action is consistent with the intent of HRI's license. *See* NRC Staff's Written Presentation at 24 (NRC Staff ''agrees . . . that the appropriate secondary groundwater restoration goal for uranium in HRI's license should be the uranium MCL specified in EPA's year 2000 rulemaking[, because] the intent of LC 10.21(A) was clearly to impose requirements consistent with the EPA's drinking water regulations''); HRI's Response at 16, 17 (HRI ''does not contest Intervenors' request to amend the secondary groundwater restoration standard to reflect the 0.03 mg/L SDWA MCL for uranium,'' because ''HRI agrees that now it is proper to set the . . . secondary groundwater restoration standard at 0.03 mg/L'').

As explained by HRI's former president, Mark S. Pelizza (who currently is vice president of HRI's parent company, Uranium Resources, Inc.): ''At the time of the FEIS the secondary restoration goals were designed to be the lower of EPA MCLs, State of New Mexico standards, or the 10 C.F.R. Part 20 release standard. The EPA uranium MCL was promulgated in December 2003, and with the advent of that standard it is reasonable to now adopt [0.03 mg/L] as a secondary restoration standard'' (Pelizza Affidavit at 14; *accord* FEIS at A-21).

It is well established that, absent compelling reasons, the Commission adheres to the ''case'' or ''controversy'' doctrine in its adjudicatory proceedings. *See Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station), CLI-93-10, 37 NRC 192, 200 n.28 (1993). Pursuant to this doctrine, a justiciable controversy must involve adverse parties representing a true clash of interests. The questions raised must be ''presented in an adversary context and in a form historically viewed as capable of resolution through the judicial process'' (*Flast v. Cohen,* 392 U.S. 83, 95 (1968)).

When, during the course of a proceeding, the parties no longer disagree about the appropriateness of a requested remedy, the question of whether that remedy should be awarded no longer represents a live controversy involving a true clash of interests. Under such circumstances, a licensing board should ordinarily refrain from adjudicating questions underlying whether that remedy should be granted. *Cf. Moore v. Charlotte-Mecklenburg Board of Education,* 402 U.S. 47, 48 (1971)

(*per curiam*) (Supreme Court dismissed appeal for lack of live controversy where both litigants desired precisely the same result).

In the instant case, because HRI and the Staff agree with the Intervenors that the appropriate secondary groundwater restoration standard for uranium is 0.03 mg/L, it may fairly be concluded that the controversy regarding that standard is no longer live and, thus, not properly amenable to judicial resolution. To adjudicate the legitimacy of the standard in this nonadversarial context would be tantamount to issuing an advisory opinion, which I decline to do. ''[My] reluctance to embark upon the rendition of advisory opinions has its roots in more than simply the husbanding of resources. Beyond that factor is the consideration that [nonjusticiable] controversies . . . are very poor vehicles for adjudicatory pronouncements'' (*Texas Utilities Generating Co.* (Comanche Peak Steam Electric Station), ALAB-714, 17 NRC 86, 94 (1983)).

Instead, consistent with the parties' agreement that the secondary groundwater restoration standard for uranium in HRI's license should be reduced from 0.44 mg/L to 0.03 mg/L, I direct that HRI's license be revised to effect that reduction by striking the final sentence of LC 10.21(A).[7]

B. The Intervenors' Hearing Rights Are Not Unlawfully Denied by License Conditions That Allow HRI To Establish Baseline Water Quality (LC 10.21 and LC 10.22) and Hydrological Properties of the Mine Sites (LC 10.23 and LC 10.31) After the Closing of This Hearing

1. The Intervenors' Hearing Rights Are Not Violated by LC 10.21 and LC 10.22, Which Govern the Establishment of Baseline Water Quality and Upper Control Limits

a. The AEA states that ''[i]n any proceeding under this Act, for the granting . . . of any license . . . the Commission shall grant a hearing upon the request of any person whose interest may be affected by the proceeding'' (42 U.S.C.

[7] Revising HRI's license in this manner is consistent with the Staff's suggestion (NRC Staff's Written Presentation at 24). Although this revision will reduce the secondary groundwater restoration level for *all* the sites, including Section 8, such action is appropriate because — as HRI and the Staff concede — it implements the intent of the license in light of EPA's recent establishment of an MCL for uranium. This change, however, will probably have no practical effect on restoration operations at Section 8. The estimated current average level of uranium at Section 8 is quite high at 1.8 mg/L, which suggests that the baseline, or *primary* restoration standard, for Section 8 will be similarly high. Because ''HRI [would] not be required to restore the uranium level at Section 8 to a cleaner, more stringent level than the average level already existing in Section 8[,] . . . it is unlikely that the secondary restoration standard [of 0.44 mg/L, much less of 0.03 mg/L] will ever come into play'' (CLI-00-12, 52 NRC at 4).

§ 2239(a)(1)). The Intervenors argue that this statutory provision entitles them to a hearing to challenge any aspect of HRI's license that is material to the public health and safety and may implicate issues of credibility and sufficiency. They contend that the license conditions governing the establishment of groundwater baseline conditions (LC 10.21) and upper control limits (UCLs)[8] for specified groundwater parameters (LC 10.22) deprive them of their hearing rights because HRI is permitted to determine these values *after* this hearing is closed and *without* any regulatory oversight. The Intervenors therefore ask this Licensing Board to keep this hearing open so they can challenge the determinations HRI ultimately makes under these license conditions; alternatively, they ask that HRI's license be invalidated. *See* Intervenors' Written Presentation at 39-43. I conclude that these license conditions do not abridge the Intervenors' hearing rights and, accordingly, that the relief requested must be denied.[9]

First, the Intervenors' argument ignores that the challenged license conditions — coupled with the procedural protocol mandated in HRI's Consolidated Operations Plan § 8.6[10] — provide a highly detailed, prescriptive methodology for establishing groundwater baselines and UCLs. The Intervenors have had a full opportunity — both here and in the prior Section 8 proceeding — to identify flaws, omissions, or irregularities in these procedures that could erroneously af-

---

[8] During mining operations, HRI will monitor three groundwater parameters (i.e., chloride, bicarbonate, and electrical conductivity) at a ring of monitor wells constructed at prescribed locations outside the mine field to ensure that the parameter concentrations stay below the established UCLs, thus ensuring that the injected lixiviant remains within the cone of depression created by the production wells. UCLs are determined by establishing the groundwater baseline for the ring of monitor wells (with outliers removed) and adding five standard deviations. *See* LC 10.22, LC 11.3; Consolidated Operations Plan § 8.7. ''[Lixiviant] contains concentrations that are so much higher than the UCL . . . that if an excursion [of lixiviant outside the cone of depression] occurred the result would be quickly recognized by a corresponding value that will be well above UCLs'' (Pelizza Affidavit at 54 n.56).

[9] The Staff argues (NRC Staff's Written Presentation at 27-28) that this argument should be summarily rejected as outside the scope of this proceeding, because at an earlier stage, the Intervenors argued — similarly to what they argue here — that the license improperly deferred the determination of important safety issues, and the then-Presiding Officer ruled that this concern was not germane to this proceeding. *See* LBP-98-9, 47 NRC at 280. The Staff fails to mention, however, that the Presiding Officer also ruled that this putatively nongermane argument may be a basis for procedural relief, such as keeping the hearing open (*ibid.*). There is an obvious — and perhaps irreconcilable — tension in ruling on the one hand that an argument is nongermane, and ruling on the other hand that the same argument may be a basis for relief. In any event, I agree with the latter ruling that the Intervenors' argument, if meritorious, would be a basis for relief, and I therefore proceed with an analysis of that argument.

[10] LC 9.3 requires HRI to conduct operations ''in accordance with all commitments, representations, and statements made in its license application . . . and in the . . . Consolidated Operations Plan . . . except where superseded by license conditions contained in this license. Whenever the licensee uses the words 'will' or 'shall' in the aforementioned licensee documents, it denotes an enforceable license requirement.''

fect the determination of groundwater baselines and UCLs and thereby endanger public health or safety. Moreover, they availed themselves of this opportunity, both here (*see* Intervenors' Written Presentation at 43) and in the prior Section 8 proceeding (*see* LBP-99-30, 50 NRC at 93, 99). Under these circumstances, the Intervenors' argument that their hearing rights have been abridged must be rejected as insubstantial.

Nor can the Intervenors salvage their argument by *conjecturing* that, when HRI establishes the groundwater baselines and UCLs, it *might* violate the prescribed procedures, and that a hearing would then be necessary to evaluate the sufficiency and credibility of HRI's data (Intervenors' Written Presentation at 42-43). This argument, if accepted, would effectively transmogrify license proceedings into open-ended enforcement actions: that is, licensing boards would be required to keep license proceedings open for the entire life of the license so intervenors would have a continuing, unrestricted opportunity to raise charges of noncompliance. Neither the AEA nor NRC regulations contemplate, much less compel, such an outcome. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-03-2, 57 NRC 19, 29 (2003) (the Commission has ''long declined to assume that licensees will refuse to meet their obligations under their licenses or our regulations'').[11]

---

[11] It is axiomatic that an intervenor should receive a ''meaningful hearing opportunity on all substantive issues material to the agency's licensing decision'' (*Hydro Resources, Inc.,* CLI-00-8, 51 NRC at 240). But this principle does not automatically render HRI's *post-hearing* determination of groundwater baselines and UCLs improper. The pertinent inquiry is whether the methodology for making these determinations is sufficiently detailed and prescriptive so that, assuming HRI complies with that methodology, the Commission has ''reasonable assurance'' that these determinations will not endanger public health and safety (10 C.F.R. § 2.104(c)(3); *see Consolidated Edison Co. of New York* (Indian Point, Unit 2), CLI-74-23, 7 AEC 947, 952 (1974). In the instant case, I have no difficulty answering that question in the affirmative (*see infra* Part III.B.1.b). Holding this hearing open pending HRI's determination of groundwater baselines and UCLs would thus serve no purpose. *See Union of Concerned Scientists v. NRC,* 735 F.2d 1437, 1449 (D.C. Cir. 1984) (''Congress did not mean to require a hearing [under the AEA] where a hearing serves no purpose''); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-03-8, 58 NRC 11, 20 & n.25 (2003) (verification by the NRC Staff that a licensee complies with preapproved design or testing criteria ''is a highly technical inquiry not particularly suitable for hearing'').

I note, moreover, that the sequential development of ISL well fields, and the correlative establishment of baselines and UCLs *after* the issuance of the mining license, is consistent with industry practice and NRC methodology (Affidavit of Craig S. Bartels at 14-16 (Apr. 21, 2005) [hereinafter Bartels Affidavit]; Pelizza Affidavit at 46-48). Indeed, if — consistent with the Intervenors' argument — HRI had constructed well fields for the purpose of establishing baselines and UCLs prior to the issuance of its license, that would have been a basis for the denial of its license. *See* 10 C.F.R. § 40.32(e) (beginning construction of process facilities or well fields before the Staff has concluded that the appropriate action is to issue the proposed license is grounds for denial of the application); *accord* NUREG-1569, ''Standard Review Plan for In Situ Leach Uranium Extraction License Applications,'' at xviii [hereinafter NUREG-1569].

Finally, the Intervenors' notion (Intervenors' Written Presentation at 43 n.16) that HRI may set groundwater baselines and UCLs without NRC oversight or public challenge is patently erroneous. Like all licensees, HRI's license-related activities — including its establishment of baselines and UCLs — will be subject to the NRC Staff's continuing regulatory oversight and enforcement authority. *See, e.g., Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), LBP-99-10, 49 NRC 145, 150 (1999) (the Intervenors' assertion that HRI can operate without NRC oversight is ''far from the truth''); 10 C.F.R. § 40.62 (Staff's inspection authority); *id.* § 40.71 (Staff's license-suspension and license-revocation authority); *id.* § 40.81 (Staff's civil penalty authority); Consolidated Operations Plan § 8.6.2.b (before HRI collects baseline samples, it must contact regulatory authorities so ''they can, if desired, collect split samples . . . for comparative purposes''); *id.* §§ 8.7.3.6, 8.7.3.7, and 8.7.3.8 (data relating to collection, analysis, and evaluation of baseline water quality, UCLs, and groundwater restoration target values ''will be maintained on site for inspection''); FEIS at 2-20 (''HRI groundwater baseline conditions and all well field restoration would be subject to NRC inspection''); William H. Ford Affidavit at 25 (Feb. 20, 1998) [hereinafter Ford Affidavit] (same).

Moreover, members of the public, including the Intervenors, may — if future circumstances warrant — file a request to institute an enforcement proceeding. Such requests, however, should be grounded on articulable ''facts'' (10 C.F.R. § 2.206(a)), not bare suspicion or tubular conjecture.

b. Having rejected the Intervenors' broad assertion that LC 10.21 and LC 10.22 abridge their hearing rights, I now address their narrower argument that these license conditions suffer from the following two alleged defects: (1) LC 10.21 gives HRI the latitude to set the average groundwater baseline (i.e., the primary groundwater restoration value) by ''averaging ore zone groundwater quality with non-ore zone,'' which the Intervenors contend is ''technically unsupportable'' (Intervenors' Written Presentation at 43); and (2) for purposes of determining UCLs, LC 10.22 requires HRI to eliminate statistical outliers, but it allegedly does not require HRI to determine data distribution, which — the Intervenors assert — ''could skew sampling results'' (*ibid.*). Neither of these arguments provides a basis for granting the Intervenors' request to invalidate HRI's license or, alternatively, to keep this hearing open.

The Intervenors' first argument — that LC 10.21 gives HRI the latitude to establish baselines in a technically unsupportable manner by averaging ore-zone with non-ore-zone baselines — is barred by the law of the case doctrine. In LBP-99-30, 50 NRC at 93, 99, *aff'd,* CLI-00-12, 52 NRC at 5, the then-Presiding Officer rejected the same argument, concluding that (1) it was refuted by the protocol mandated in HRI's Consolidated Operations Plan for establishing baselines, which requires HRI to determine the baselines for the ore zones and

the non-ore zones separately, and (2) the methodology prescribed in the protocol for establishing baselines was acceptable. As the Presiding Officer explained (50 NRC at 93, 99) (citations omitted):

> Intervenors . . . allege that HRI lumped chemical data from poor-quality water in the ore zone with data from high-quality water outside the ore zone, thus degrading the baseline for the high-quality water. Intervenors are concerned that may also be done when setting restoration goals. . . .
>
> As pointed out by HRI . . . , baselines . . . will be set according to the protocol in [the Consolidated Operations Plan] Rev. 2.0 § 8.6. There is no basis in the record for finding that this protocol is unacceptable. Accordingly, I accept this protocol as adequate . . . .
>
> * * * *
>
> As described in [Consolidated Operations Plan] Rev. 2.0 § 8.6.3, baseline will be determined after the mine units have been installed for groundwater in the ore zone and non-ore zone separately. HRI agrees that baseline should be determined in both the production area [i.e., well field, or ore zone] and the mine area [i.e., monitor well ring, or non-ore zone] separately.

The Intervenors provide no persuasive reason for revisiting that decision.

Even if I were to revisit that decision, however, I would not change it. Contrary to the Intervenors' assertion, the procedures in LC 10.21, as supplemented by the protocol in the Consolidated Operations Plan, prescribes a detailed methodology for establishing baselines that *prevents* HRI from averaging ore-zone baselines with non-ore-zone baselines.

LC 10.21 provides the following detailed procedure for establishing baselines:

> The licensee shall establish groundwater restoration goals by analyzing three independently-collected groundwater samples of formation water from: (1) each monitor well in the well field; and (2) a minimum of one production/injection well per acre of well field. Samples shall be collected a minimum of 14 days apart from each other. Groundwater restoration goals shall be established on a parameter-by-parameter basis, with the primary restoration goal to return all parameters to average pre-lixiviant injection conditions. . . .

The Consolidated Operations Plan § 8.6, in turn, provides a highly reticulated protocol for implementing LC 10.21. Most significantly (for present purposes), section 8.6.3 states — in explicit negation of the Intervenors' argument — that the average baseline for the ore zone (i.e., Production Zone Wells) will be determined *separately* from the average baseline for the non-ore zone (i.e., Monitor Well Ring and Overlying Zones):

> Baseline water quality is determined by averaging the data collected for each parameter, from each well, for each zone that is monitored. . . .

Baseline conditions are determined as follows:

a. Production Zone (Production Pattern) Wells — Individual well data for each parameter are averaged. The resulting average is generally referred to as the production area average.

b. Mine Area (Monitor Well Ring) Wells — Individual monitor well data for each parameter are averaged. The resulting average is generally referred to as the mine area average.

c. Overlying Zones — Individual monitor well data for each parameter are averaged. The resulting average is generally referred to as the non-production area average.

Consolidated Operations Plan § 8.6.3.[12]

Not only does the plain language of the Consolidated Operations Plan negate the Intervenors' assertion that HRI has latitude to determine the primary groundwater restoration value by averaging the ore zone groundwater quality with non-ore-zone groundwater quality, but HRI expressly refutes that assertion (Pelizza Affidavit at 53), and it affirmatively attests that it will determine groundwater baselines ''in the ore zone and non-ore zone separately'' (*ibid.*). Moreover, the relevant NRC guidance document (NUREG-1569 at 5-39, 6-9) provides for the establishment of restoration goals based on data from the well field (i.e., the production zone or ore zone); it does *not* provide for averaging the ore zone baselines with the non-ore-zone baselines. *See* Affidavit of Stephen J. Cohen at 13 (Apr. 29, 2005) [hereinafter Cohen Affidavit].

In short, the Intervenors' challenge to the methodology in LC 10.21 for determining baselines lacks merit, because the premise of their challenge — i.e.,

---

[12] The Production Zone (Production Pattern) Wells are the injection and extraction wells in the ore zone or well field. *See* FEIS at 4-15 (the ''well field'' is ''where production and injection wells have been completed and solution mining occurs''). The baselines that HRI will establish in the well field constitute the primary restoration goals (*ibid.;* NUREG-1569 at 5-39).

In contrast, the Mine Area (Monitor Well Ring) Wells and the Overlying Zone Wells are in the non-ore zone. The baselines from the monitor wells — which encircle the well field at a distance of 400 feet and which monitor for horizontal lixiviant excursions — are used to calculate UCLs (*supra* note 8; FEIS at 4-15 to 4-20; NUREG-1569 at 5-41). The baselines from the Overlying Zone Wells, which are in the aquifers overlying the Westwater Aquifer, are used to monitor vertical excursions of lixiviant (Consolidated Operations Plan § 8.6.2; FEIS at 4-18 to 4-19).

As a matter of common sense, the baseline from the well field or ore zone is not combined with the baseline from the Monitor Well Ring outside the ore zone for purposes of determining UCLs, because such an approach would likely inflate the UCL, making it more difficult to detect lixiviant excursions. Likewise, common sense dictates that the ore-zone baselines and non-ore-zone baselines should not be combined to determine the primary groundwater restoration goal, because such an approach would generally require the Licensee to restore the groundwater in the well field to a cleaner, more stringent level than previously existed, thus exceeding Commission requirements. *See* CLI-00-12, 52 NRC at 4.

that HRI has the latitude to average the ore zone baselines with the non-ore-zone baselines — is refuted by HRI's Consolidated Operations Plan, NRC's guidance document, and representations made under oath by HRI and the NRC Staff.

Nor is there merit to the Intervenors' assertion that LC 10.22 — which provides the methodology for determining UCLs — could improperly skew the sampling results because it does not require HRI to determine data distribution when it eliminates statistical outliers. In this regard, the Intervenors rely (Intervenors' Written Presentation at 43) on the declaration of their expert, Dr. Abitz, who avers that the ''outlier test is meaningless unless the data distribution is known and a statistical test is first performed to determine the data distribution, as recommended in [e.g.,] the U.S. Environmental Protection Agency's guidance for groundwater monitoring at RCRA facilities'' (Declaration of Dr. Richard J. Abitz at 15-16 (Mar. 3, 2005) [hereinafter Abitz Affidavit]).[13]

Puzzlingly, Dr. Abitz ignores the term of HRI's license that provides ''[p]rior to calculating upper control limits, outliers shall be eliminated using methods consistent with those specified in *EPA's 1989, ''Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance''* (LC 10.22(B) (emphasis added)). Thus, the EPA document that Dr. Abitz opines must be used by HRI to conduct a meaningful outlier test is specifically referenced in HRI's license, and HRI is required to comply with the methods in that document when eliminating outliers. *See* Cohen Affidavit at 11; Pelizza Affidavit at 52; Bartels Affidavit at 17-18. Dr. Abitz's opinion — which appears to be based on a startling misreading of LC 10.22 — may therefore be summarily rejected.[14]

---

[13] The witnesses in this proceeding accompanied their written testimony with credentials establishing their education, experience, and expertise. I find that these credentials qualify the witnesses as experts for purposes of this proceeding.

[14] The NRC Staff correctly observes (*see* Staff's Written Presentation at 30) that the Intervenors' experts include arguments in their affidavits that the Intervenors fail to mention, much less develop, in their written presentation. I decline to consider those dormant, undeveloped arguments. The relevant regulation requires the Intervenors to submit a written presentation that ''describe[s] in detail any deficiency or omission in the license application, with . . . a detailed statement of reasons why any particular sections or portion is deficient'' (10 C.F.R. § 2.1233(c)). Arguments that the Intervenors failed — in derogation of section 2.1233(c) — to raise or develop in their written presentation will be treated as waived for several reasons. First, the Intervenors' failure to raise an argument in their written presentation deprives HRI of a fair opportunity to discern and attempt to rebut that argument. *See Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), ALAB-843, 24 NRC 200, 204 (1986) (argument on appeal that is not adequately briefed need not be considered). Second, my function as the Presiding Officer of this Licensing Board is to be an impartial arbiter of the challenges raised by the Intervenors, and the integrity of this function would be undermined if I were required to search the record for evidence to construct and develop the Intervenors' arguments. *See, e.g., Williams v. Eastside Lumberyard and Supply Co.,* 190 F. Supp. 2d 1104, 1114 (S.D. Ill. 2001). Finally, judicial economy and efficiency are promoted by a rule that relieves the Licensing Board from the task of

(Continued)

2. The Intervenors' Hearing Rights Are Not Violated by LC 10.23 and LC 10.31, Which Govern the Establishment of Hydrological Properties of the Mine Sites

a. The Intervenors argue broadly that LC 10.23 and LC 10.31 deprive them of their hearing rights under the AEA, because these license conditions allow HRI to establish hydrological properties of the mine sites *after* this hearing is closed and *without* NRC oversight.[15] For the same three reasons that I rejected this expansive type of attack on LC 10.21 and LC 10.22 (*supra* Part II.B.1.a), I reject it here. First, these license conditions, as supplemented by the procedural protocol prescribed in HRI's Consolidated Operations Plan §§ 6.5.3, 8.5 to 8.5.3, provide a highly detailed and prescriptive methodology for establishing the hydrological properties of the mine sites. Because the Intervenors have had the opportunity — both here and in the prior Section 8 proceeding — to identify flaws, omissions, or irregularities in these procedures that could erroneously affect HRI's determinations, they cannot properly be heard to complain that they have been denied their right to a hearing (*supra* pp. 93-94). Second, there is no merit to the argument that an otherwise valid license condition is rendered inadequate based solely on the Intervenors' *conjectural* assertion that HRI *might* fail in the future to comply with that procedure (*supra* p. 94). Third, there is no merit to the Intervenors' assertion that HRI is permitted to determine interaquifer communication and fracturing at the mine sites without NRC oversight or public challenge (*supra* p. 95).

b. The Intervenors also launch a narrower attack against LC 10.23. This license condition is invalid, they argue, because it gives HRI excessively ''wide latitude to exercise judgment'' in determining vertical mine-zone containment (Intervenors' Written Presentation at 45). Specifically, the Intervenors assert that: (1) ''the amount of change in water level downward in a monitor well, which signifies interaquifer communication, can take weeks or months to develop and

---

searching for the Intervenors' arguments by ''dig[ging] through the reams of paper which [they] have deposited . . ., particularly [when the Intervenors] did not consider the [arguments] sufficiently important to raise [them] in [their written presentation]'' (*Dahlberg v. Avis Rent A Car System, Inc.,* 92 F. Supp. 2d 1091, 1110 (D. Col. 2000)). This rule applies with special force in this case, where the Intervenors are represented by experienced counsel who submitted a 100-page written presentation accompanied by a voluminous administrative record. *See United States v. Dunkel,* 927 F.2d 955, 956 (7th Cir. 1991) (''[j]udges are not like pigs, hunting for truffles buried in [the record]'').

[15] LC 10.23 states: ''Prior to injection of lixiviant in a well field, groundwater pump tests shall be performed to determine if overlying aquitards are adequate confining layers . . . .''

LC 10.31 states: ''Prior to injection of lixiviant at the Church Rock site, the licensee shall conduct a Westwater Canyon aquifer step-rate injection (fracture) test within the Church Rock site boundaries, but outside future well field areas. One such test at the Unit 1 or Crownpoint site shall also be performed before lixiviant injection begins at either of these sites.''

can be difficult to detect'' (*ibid.*); and (2) ''pump tests, like those required by LC 10.23 often do not establish the hydraulic properties of confining layers'' (*ibid.*). Neither of these assertions provides a basis for invalidating HRI's license or holding this proceeding open pending HRI's performance of the groundwater pump tests.

Pursuant to LC 10.23, HRI must — before injecting lixiviant into the well field — perform groundwater pump tests to determine if the aquitards overlying and underlying the Westwater Aquifer provide an adequate containment layer. The Intervenors assert that such pump tests are inadequate to establish that the aquitards will prevent the vertical excursion of lixiviant outside the Westwater Aquifer into the overlying and underlying aquifers. This assertion ignores that the pump tests, by themselves, are not intended to guarantee against interaquifer communication of lixiviant. Rather, these tests are an integral part of a multifaceted and ongoing process designed to provide a ''reasonable assurance'' that vertical excursions of lixiviant outside the Westwater Aquifer will not occur (*see* 10 C.F.R. § 2.104(c)(3)).

For example, HRI's data indicate that the Brushy Basin Aquitard — which overlies the Westwater Aquifer and separates it from the Dakota Aquifer — provides a relatively thick confining layer, averaging 67 to 112 feet in thickness at the Crownpoint site (FEIS at 3-15), 153 feet in thickness at Unit 1 (*id.* at 3-18), and 63 feet at Section 17 (*ibid.*). Given the projected ''thickness and rock type'' of the Brushy Basin Aquitard at the three sites, the NRC Staff concluded that ''there should be little likelihood'' of interaquifer communication during mining operations (*id.* at 4-42, 4-51, 4-55).

That the Westwater and Dakota Aquifers are not connected is also supported by the fact that leakage between the two aquifers ''is not indicated, since there is not a corresponding reaction in Dakota [Aquifer] water levels to water level changes in the Westwater [Aquifer] that would suggest leakage'' (FEIS at 4-42). This conclusion is based on data collected from January 1992 through March 1996 (*ibid.*).

Additionally, HRI already has provided the results of pump tests at each site that support a conclusion that the Brushy Basin Aquitard is a confining layer. At the Crownpoint site, HRI installed one monitor well in the Dakota Aquifer (the aquifer overlying the Brushy Basin Aquitard) and five wells in the Westwater Aquifer, and 72 hours of testing revealed no discernable aquifer interconnection — that is, no drawdown was detected by the Dakota Aquifer monitor well (FEIS at 3-29). At Unit 1, HRI relied on pump test data collected by Mobil Oil Company, which installed two wells in the Dakota Aquifer and 27 wells in the Westwater Aquifer, and 2 days of testing revealed no discernable aquifer interconnection (*id.* at 3-31). And at Section 17, HRI installed one monitor well in the Dakota Aquifer and four wells in the Westwater Aquifer, and the pump testing revealed no discernable aquifer interconnection (*id.* at 3-35).

HRI's data also indicate that the Recapture Aquitard — which underlies the Westwater Aquifer and separates it from the Cow Springs Aquifer — provides a thick confining layer, averaging about 260 feet in thickness at the Crownpoint site (FEIS at 3-12, 3-25, 4-19), 250 feet in thickness at Unit 1 (*id.* at 3-18, 4-19), and 180 feet at Section 17 (*id.* at 3-18, 3-35, 4-19). Given the projected ''thickness and rock type'' of the Recapture Aquitard at the three sites, the NRC Staff concluded that ''there should be little likelihood'' of interaquifer communication during mining operations (*id.* at 4-42, 4-51, 4-55).

Additionally, prior to injecting lixiviant at a mine site, HRI must perform groundwater pump tests to ensure that the aquitards provide adequate containment layers for the Westwater Aquifer (LC 10-23; FEIS at 4-43; Consolidated Operations Plan §§ 8.5 to 8.5.3). Following completion of the groundwater pump tests at a site, HRI must prepare a Mine Unit Hydrologic Test Document (MUHTD) that, in accordance with NRC requirements, will be reviewed by the New Mexico Environmental Department as well as the Safety and Environmental Review Panel (SERP)[16] to ensure that the planned mining activities are consistent with licensing and technical requirements (FEIS at 4-43). The MUHTD must include (1) a map showing all the production and monitor wells; (2) geologic cross sections; (3) an isopach map of the overlying containment layer; (4) a discussion of how the hydrologic test was performed, including well completion reports; (5) a discussion of the results of the hydrologic test, including raw data for the pumping tests, drawdown match curves, water level graphs, and drawdown maps; and (6) sufficient information to show that the monitor wells will be in adequate communication with the production wells. Consolidated Operations Plan § 8.5.3. The SERP must prepare a written report that evaluates safety and environmental concerns, and this report and the MUHTD will remain on site and available for regulatory review (*ibid.*).

Finally, HRI must: (1) maintain well field injection pressures considerably below anticipated conservative fracture pressures for the aquifer that could cause vertical interaquifer communication (LBP-99-30, 50 NRC at 94; LC 10.3; FEIS at 4-44); (2) conduct well integrity tests to ensure that no well casing provides a path for interaquifer communication (Consolidated Operations Plan §§ 6.1, 6.4.1.4); and (3) monitor overlying aquifers for lixiviant excursions during mining operations (*id.* §§ 8.7.1 to 8.7.1.2).

---

[16] The SERP consists of a minimum of three individuals employed by HRI, one of whom shall be designated the SERP chairman. One member shall have expertise in management and shall be accountable for decisions implicating managerial and financial issues. One member shall have expertise in operations and/or construction and shall be accountable for decisions implicating operational issues. One member shall be the Environmental Manager and shall be accountable for decisions implicating environmental and radiation issues. LC 9.4(B).

These requirements, viewed in conjunction with data already submitted by HRI and reviewed by the NRC Staff regarding the Westwater Aquifer's restrictive aquitards, provide the requisite reasonable assurance that vertical excursions of lixiviant outside the Westwater Aquifer will not occur during mining operations.

Moreover, HRI's obligation to take corrective action if an excursion occurs (Consolidated Operations Plan § 8.7.2; LC 10.12 to LC 10.14; *see* FEIS at 4-21 to 4-22, 4-62) provides the requisite reasonable assurance that a vertical excursion of lixiviant will not pose a danger to public health or safety.

C. The Intervenors' Challenge to HRI's Groundwater Restoration Plan Lacks Merit, but One of Their Challenges to HRI's Remediation Cost Estimates Provides a Basis for Revising HRI's Restoration Action Plan

The Intervenors argue (Intervenors' Written Presentation at 50, 63, 64) that HRI's Restoration Action Plans (RAPs) for Section 17, Crownpoint, and Unit 1 fail to provide an adequate surety, because: (1) HRI has not demonstrated that it can restore the groundwater by flushing with 9 pore volumes; (2) HRI has not shown that natural groundwater attenuation will assist in groundwater restoration; and (3) HRI has failed to provide reasonable cost estimates for several decommissioning activities. The Intervenors assert that HRI's license should be invalidated due to these deficiencies or, alternatively, HRI should be directed to revise the allegedly deficient cost estimates (*id.* at 1-2). For the reasons discussed below, I conclude that none of these challenges supports invalidating HRI's license; however, I agree with the Intervenors that HRI's RAP improperly fails to include a cost estimate for expenses associated with disposal site unloading, surveying, and decontamination. I therefore direct HRI to revise its RAP to include this cost estimate.

1. The Intervenors' Challenge to HRI's Plan To Restore Groundwater Quality by Flushing with 9 Pore Volumes Is Precluded by Law of the Case and Lacks Merit in Any Event

a. The Intervenors attack HRI's plan to remediate the groundwater at Section 17, Crownpoint, and Unit 1 by flushing the mine fields with 9 pore volumes, arguing that HRI has failed to demonstrate that 9 pore volumes will restore the groundwater to the standards prescribed in HRI's license. Specifically, the Intervenors claim the 9 pore volume estimate is ''completely unsupported'' and contradicted by experience at other sites (Intervenors' Written Presentation at 51-55). I conclude that this argument is barred by law of the case and, alternatively, lacks merit.

Preliminarily, it is important to understand the groundwater restoration approach prescribed by HRI's license. Before HRI can start mining operations, it must ''submit an NRC-approved surety arrangement to cover the estimated costs of . . . groundwater restoration'' (LC 9.5). As discussed *supra* Part II.A, HRI's license requires HRI to restore the affected groundwater in the mine fields to prescribed restoration levels (LC 10.21). The NRC Staff concluded that the prescribed restoration levels could be achieved by flushing the mine fields with 9 pore volumes (FEIS at 4-40). Accordingly, the license states that ''[s]urety for groundwater restoration of the initial well fields shall be based on 9 pore volumes'' (LC 9.5), and it directs that surety shall be maintained at this level until the actual number of pore volumes required to restore the groundwater quality is established by conducting a restoration demonstration at Section 8, as described in LC 10.28 (LC 9.5).

This demonstration must be conducted at Section 8 before HRI injects lixiviant at Section 17, Crownpoint, or Unit 1, and the demonstration must be conducted ''on a large enough scale, acceptable to the NRC, to determine the number of pore volumes that shall be required to restore a production-scale well field'' (LC 10.28). HRI must submit the results of the groundwater restoration demonstration to NRC for approval (*ibid.*), and these results, in turn, will be used to either adjust or confirm the accuracy of the 9 pore volume estimate before commencing operations at the other three mining sites. If, based on this restoration demonstration, ''it is found that well field restoration [for the other sites] requires greater pore-volumes . . . , the value of the surety will be adjusted upwards'' (LC 9.5).

The Intervenors' challenge to HRI's plan to use 9 pore volumes for groundwater restoration at Section 17, Crownpoint, and Unit 1 overlooks the critical point that, pursuant to LC 9.5, the 9 pore volume figure is an *initial* estimate that will be revisited after HRI conducts a groundwater restoration demonstration at Section 8 — an approach that the Commission has declared is ''prudent'' (CLI-04-33, 60 NRC at 593 n.52).

More fundamentally, the Intervenors' challenge to HRI's groundwater restoration approach overlooks the fact that the Commission already has considered and sustained that approach, thus precluding the Intervenors' challenge here pursuant to law of the case doctrine. In 1999, the Intervenors claimed that the 9 pore volume estimate for groundwater restoration at Section 8 was ''not based upon safety considerations, but rather was based upon what was convenient for [HRI]'' (LBP-04-3, 59 NRC at 92).[17] The then-Presiding Officer rejected that argument,

[17] The Intervenors' 1999 argument is substantially identical to their current argument. In 1999, they argued that the 9 pore volume estimate was based on HRI's convenience rather than public safety; here, they argue similarly that the 9 pore volume estimate was based on HRI's cost considerations (i.e., HRI's financial convenience) rather than public safety. *See* Intervenors' Written Presentation at 52-53.

finding that the restoration plan was based upon the NRC Staff's ''professional judgment,'' and observing that the number of pore volumes could be increased in the future if '' 'at any time' it [was] determined that well-field restoration requires greater pore volumes'' (*Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), LBP-99-13, 49 NRC 233, 236-37 (1999)). The Commission affirmed (CLI-00-8, 51 NRC at 244-45).

On a second occasion in 1999, the Intervenors again attacked the 9 pore volume estimate, claiming that it would not be sufficient for successful groundwater restoration. Again, the then-Presiding Officer rejected the argument. He stated that if 9 pore volumes did not achieve groundwater restoration standards, ''HRI will be required to continue to restore; the requirement does not end at 9 pore volumes. In addition, HRI must demonstrate successful restoration at [the Section 8 site] or it will not be permitted to conduct injection mining elsewhere'' (LBP-99-30, 50 NRC at 106 (citation omitted); *see* LC 10.29). Again, the Commission declined to disturb the Presiding Officer's decision, observing that the Intervenors had not identified any clearly erroneous factual finding or important legal error (CLI-00-12, 52 NRC at 3).

In short, the Intervenors already have challenged the reasonableness of HRI's groundwater restoration approach, and they lost. As the Commission stated, the reasonableness of HRI's groundwater restoration approach using an ''initial 9 pore volume estimate for groundwater restoration at Section 8 was litigated, indeed litigated twice, in separate decisions'' (CLI-04-33, 60 NRC at 587). The Intervenors' attempt to relitigate this issue is therefore precluded by law of the case.

Significantly, the Intervenors *concede* that the Commission concluded that ''9 pore volumes is a sufficient initial pore volume for all the proposed mine sites'' (Intervenors' Reply Brief at 16 n.4). They nevertheless argue that this should not preclude revisiting the issue, because they ''do not agree that 9 pore volumes is actually sufficient to restore groundwater'' (*ibid.*). Of course, a party's bare disagreement with a decision does not, under law of the case doctrine, justify revisiting that decision (*supra* pp. 87-88).[18]

[18] That the Intervenors are now precluded from challenging HRI's pore volume estimate does not necessarily mean they will never have an opportunity to participate in proceedings involving the consideration of pore volumes. For example, if HRI determines that it must adjust the pore volume estimate and, accordingly, adjust its surety amount, it will be required to amend its license; because the Intervenors will have notice of the license amendment, they ''may have a further opportunity to participate on pore volume considerations'' (CLI-04-33, 60 NRC at 593 n.52). Alternatively, if HRI finds it is unable to return a groundwater quality parameter to the prescribed restoration goal, it may — in lieu of increasing the pore volume and the surety amount — request that the restoration standard specified in the license be relaxed. ''The Staff and HRI agree that any such request would have to be in the form of a license amendment, where again the Intervenors would have the opportunity to intervene'' (*ibid.*).

b. Even if I were to revisit that decision, however, I would reject the Intervenors' challenges as insubstantial. The Intervenors argue that HRI's belief ''that groundwater quality can be restored by circulating 9 pore volumes through the aquifer is completely unsupported'' (Intervenors' Written Presentation at 51). The record refutes this argument.

In the FEIS, the NRC Staff explained that, in establishing the 9 pore volume estimate, it examined data from: (1) small-scale rock core restoration tests (FEIS at 4-30 to 4-31); (2) a pilot test conducted in the Westwater Aquifer near the Church Rock site in June 1980 by United Nuclear Corporation and Teton Exploration Company (*id.* at 4-31); (3) a pilot project conducted by Mobil Oil Company in 1979 and 1980 near the Unit 1 site (*id.* at 4-37); and (4) a study sponsored by the NRC to investigate the ability of natural geochemical processes to restore water quality after ISL mining activities (*id.* at 4-39). Notwithstanding the above data, the NRC Staff concluded that ''groundwater restoration criteria for specific mining projects should be set taking into account site-specific conditions and spatial variation. Restoration criteria should be based on a statistical analysis of groundwater chemistry data from a large set of wells sampled over a period of time'' (*ibid.*).

Until such site-specific restoration criteria are established, however, the NRC Staff must determine a pore volume estimate for purposes of determining how much surety the Licensee must provide. The Staff decided that achieving the desired groundwater restoration standards here ''would require significantly more than 4 pore volumes, as proposed by HRI,'' and it established a 9 pore volume estimate for HRI's groundwater restoration effort (FEIS at 4-40). The Staff explained (*ibid.*):

> Depending on the parameter and the test chosen, the pore volumes required to achieve the [desired water quality restoration standard] ranged from less than 1 pore volume to greater than 28 pore volumes. However, plots of TDS [total dissolved solid] concentrations and specific conductivity values . . . show little improvement with continued pumping after 8 to 10 pore volumes. The Mobil Section 9 pilot is the largest restoration demonstration conducted in the project area to date. During groundwater restoration activities in the Mobil demonstration, TDS concentrations were close to the secondary restoration goal . . . after 6.9 and 9.7 pore volumes. On the basis of the data submitted by HRI, the Staff concludes that practical production-scale groundwater restoration activities would at most require a 9 pore volume restoration effort. . . . [S]urety should be maintained at this level until the number of pore volumes required to restore the groundwater quality of a production-scale well field has been demonstrated by HRI.

I find that — contrary to the Intervenors' assertion — the 9 pore volume figure selected by the NRC Staff is an acceptable initial pore volume estimate that finds

adequate support in the record. *Accord* LBP-99-13, 49 NRC at 236-37, *aff'd,* CLI-00-8, 51 NRC at 244-45; *see also* LBP-99-30, 50 NRC at 105-06.[19]

The Intervenors nevertheless complain that the 9 pore volume estimate is contradicted by experience at other ISL sites (Intervenors' Written Presentation at 51). This complaint is fully answered by the fact that before HRI begins mining operations at Section 17, Crownpoint, or Unit 1, it will have the benefit of site-specific data obtained from its restoration efforts both at Section 8 and its groundwater restoration demonstration at Church Rock (LC 9.5 and LC 10.28). Based on those data, HRI must make any necessary adjustment to its pore volume estimate, and ''[i]f at any time it is found that well field restoration requires greater pore volumes . . . , the value of the surety will be adjusted upwards'' (LC 9.5). Thus, consistent with the Intervenors' wish, the ultimate pore volume estimate for Section 17, Crownpoint, and Unit 1 — and, correlatively, the ultimate surety amount for groundwater restoration at those sites — will be supported by actual experience that provides the best possible data from the most relevant ISL site. *See* LBP-04-3, 59 NRC at 94 n.46 (the Section 8 well field demonstration will provide ''the best possible, site-specific data'' for making any adjustment to the 9 pore volume estimate and, likewise, to the surety).[20]

2. The Intervenors' Contention That Natural Groundwater Attenuation Will Not Assist in Groundwater Restoration Is Precluded by Law of the Case and Lacks Merit in Any Event

a. The Intervenors also claim that HRI failed to show that natural groundwater attenuation of contaminants will assist in groundwater restoration (Intervenors'

---

[19] The Intervenors assert (Intervenors' Written Presentation at 53) that the NRC Staff improperly elevated cost concerns over public health and safety concerns when it selected the 9 pore volume figure. This assertion finds no support in the record. Some of the salient factors the Staff considered were that (1) water quality improved little after 8 to 10 pore volumes, (2) the Mobil Section 9 pilot restoration effort was the largest restoration demonstration conducted in the project area to date, and (3) the Mobil pilot restoration effort approached the secondary restoration goal after 9.7 pore volumes. *See* FEIS at 4-40. These types of technically based analytic factors — *not* cost factors — informed the Staff's judgment.

[20] In an argument relegated to a footnote, the Intervenors assert that HRI failed to provide a ''technical basis'' for its calculation of ''flare factors,'' which are multipliers used in the calculation of the pore volume estimate to account for any lixiviant that may have ''flared,'' or migrated laterally or horizontally outside the boundaries of the calculated ore pore volume (Intervenors' Written Presentation at 52-53 n.17). This assertion lacks merit. As the record shows, the flare factors were ''calculated by URI [HRI's parent company] engineers based on operating experience at other restoration demonstrations and commercial operations,'' and the methods used to calculate them ''are consistent with the methods used for the Mobil Section 9 Pilot . . . [which] were the basis for the NRC evaluation in the FEIS'' (Pelizza Affidavit at 61-62). *See also* CLI-04-33, 60 NRC at 589-90 (Commission observes that HRI explained its calculation of flare factors over 5 years ago, in 1999).

Written Presentation at 55). The Intervenors rely on their expert, Dr. Abitz, who asserts that when uranium ore is present in aquifer sediments, the concentration of uranium in groundwater is controlled by the pH, redox state (i.e., oxidation reduction potential), and concentrations of bicarbonate and carbonate ions in the groundwater (Abitz Affidavit at 34). The injection of lixiviant, according to Dr. Abitz, transforms the redox state of an aquifer, removing the reducing material, and creating ''a toxic zone of aqueous contaminants in oxidized groundwater'' (*ibid.*). Dr. Abitz claims that ''the uranium and other toxic metals will remain in solution as they migrate outside the mining zone in their cocoon of oxidized water'' (*id.* at 35).

Dr. Abitz further claims that the injection of lixiviant creates high concentrations of uranium that could not exist under natural oxidizing conditions, and the removal of uranium from groundwater via natural processes takes much longer when the groundwater contains higher concentrations of uranium (Abitz Affidavit at 35, 39). Dr. Abitz states that the transition of the Westwater Canyon aquifer to an oxidizing environment in the Church Rock and Crownpoint areas due to the injection of lixiviant ''makes the removal of uranyl-carbonate anions from groundwater under natural conditions extremely inefficient, due to the limited number of adsorption sites and the slow kinetics associated with reduction and precipitation of the uranium'' (*id.* at 39). He concludes that ''[n]either HRI nor the NRC Staff has published site-specific geochemical data to support their speculation that adsorption and redox conditions downgradient of ore zones will (1) attenuate mining fluids that may escape during production operations and (2) enhance restoration efforts by lowering the concentrations of uranium and other redox sensitive metals (e.g., arsenic and selenium)'' (*ibid.*).

I reject the Intervenors' argument for two alternative reasons. First, I conclude that this argument is precluded by law of the case. In 1999, the then-Presiding Officer squarely rejected Dr. Abitz's opinion that natural attenuation of redox sensitive metals through chemical reduction is likely to fail (LBP-99-30, 50 NRC at 104). The Presiding Officer explained (*id.* at 86-87, 102, 104) (citations omitted):

> [I]t is well documented that the Westwater [Aquifer] is rich in humates. . . . Humates are organic compounds that serve as reducing agents, taking oxygen from groundwater, thus precipitating elements, such as uranium, that depend on the oxygen to remain in solution.
>
> * * * *
>
> Arsenic, molybdenum, radium, and uranium are readily precipitated by redox reactions or adsorption on mineral grains while traveling through the rock, so most of these elements will remain close to the mine site and not create problems at a distance.
>
> * * * *

> It . . . should be recognized that the Westwater [Aquifer] is huge, . . . [and] toxic elements that migrate out of [the mine field] are affected by both precipitation and dilution. These natural mechanisms help to protect the quality of water in the aquifer as a whole from the toxicity contained in small areas.
>
> * * * *
>
> So far as I am aware, there are no reports of water with elevated uranium levels in wells away from the [old uranium mining site at the] Church Rock site, despite the fact that the mean values of water sampled in the vicinity of the site show values for this element well above any drinking water standards. This is persuasive evidence that uranium does not travel readily through the aquifer, even over timescales of thousands of years.

The Presiding Officer thus concluded that the Westwater Aquifer ''act[s] as a significant precipitating agent for uranium and other elements'' (*id.* at 105), and the Commission declined to disturb that decision (CLI-00-12, 52 NRC at 3). The Intervenors present no viable reason for revisiting that decision. Their argument that HRI has failed to show that natural groundwater attenuation of contaminants will assist in groundwater restoration is therefore precluded by law of the case.

Alternatively, I reject the Intervenors' argument on the merits. HRI — in opposing the Intervenors' argument — relies on the Affidavits of its experts, Mr. Pelizza and Mr. Bartels (HRI's Response at 36-38). Mr. Pelizza points out that the Westwater Aquifer has demonstrated ''the regional capacity to reduce and precipitate uranium over a frontal length that extends from west of the Church Rock area, through Crownpoint, over to the Ambrosia Lake area, 60 or so miles'' (Pelizza Affidavit at 30). In contrast to this capacious redox area, the area that HRI proposes to mine is ''extremely small'' (*ibid.*). Mr. Pelizza states that ''[i]t is logical that the regional reducing capacity of the aquifer will prevail over any small pockets of residual oxidation that may persist'' (*ibid.*). He explains (*id.* at 30 n.11):

> [B]oth Intervenors and HRI agree that [broad uranium roll front deposition] processes are ongoing today [in the Westwater Aquifer]. Regional roll fronts require broad areas of upgradient meteoric oxidation to keep uranium mobile until that oxidized water which moves downgrade slowly encounters a zone of abundant reductant downdip. It is at this regional redox interface where the oxygenated water is reduced and uranium is deposited. Again, this process is active today. It is unreasonable to conclude that the Westwater Formation maintains capacity to absorb meteoric oxygen from expanses of slow moving ground water on a grand scale yet this same redox interface would be unable to absorb oxygen in similar form at a far smaller scale from slow moving groundwater that may exist after restoration from an ISL mine.

Mr. Bartels provides further support for Mr. Pelizza's statements. Mr. Bartels asserts that Dr. Abitz ''provides no specifics'' for his arguments, instead utilizing ''only a generic discussion of geochemistry available in any good book on the subject and that applies equally well to all ISL sites, past and present'' (Bartels Affidavit at 13). Mr. Bartels states that geologists can easily find the location of a ''redox front'' in an aquifer by examining the color of a drill core: oxidation fronts are tan and reduction fronts are gray (*ibid.*). He states that he has studied ''multiple post-leach cores,'' and ''[i]f the oxidation was as intense and complete as Abitz implies, the color change from reduced to oxidized should be easily seen,'' but ''we saw no color change'' (*ibid.*). In other words, Mr. Bartels' actual experience refutes Dr. Abitz's theoretical, unsupported argument.

Dr. John Bradbury of the NRC Staff agrees with Mr. Bartels' statements (Affidavit of Dr. John W. Bradbury at 5 (Apr. 29, 2005) [hereinafter Bradbury Affidavit]). Additionally, NRC Staff member Mr. Ford states that — contrary to Dr. Abitz's assertion — uranium excursions *will* be retarded by reducing zones in the aquifer (Ford Affidavit at 10 (Mar. 12, 1999)). Finally, research conducted for the NRC by the Pacific Northwest Laboratory (PNL) ''showed that after solution mining, the reducing capacity of sediments outside the well field (and even for leached ore zones within the well field) remains very high'' (*ibid.*). PNL concluded that the lixiviant's ability ''to mobilize uranium quickly expends itself within the well field, and that when the dissolved uranium encounters reducing conditions in the rock, the uranium is removed from solution'' (*ibid.*).

I am persuaded by the evidence and arguments of HRI and the NRC Staff that, contrary to the Intervenors' claim, natural attenuation will assist in groundwater restoration.

3. One of the Intervenors' Challenges to HRI's Remediation Cost Estimates — Namely, Their Challenge to the Cost Estimates for Disposal Site Surveys, Decontamination, and Unloading Charges — Provides a Basis for Revising HRI's Restoration Action Plan

a. Groundwater Restoration

The Intervenors allege that HRI failed to provide a reasonable cost estimate for groundwater restoration (Intervenors' Written Presentation at 59). They base this assertion on their claim that neither HRI nor the Staff provided any evidence that the 9 pore volume estimate will be adequate to restore water quality at Section 17, Crownpoint, and Unit 1 to baseline conditions (*ibid.*). They argue that the license condition that requires HRI to revise its surety upward if it finds the 9 pore volume estimate inadequate is not an adequate remedy, because ''[p]ost-licensing revisions to a license are meant to cure minor defects, not compensate for major deficiencies in the original license application'' (*id.* at 60).

Although the Intervenors characterize this argument as a challenge to a component of HRI's cost estimate, it is substantively no different than the Intervenors' earlier attack on HRI's 9 pore volume estimate to restore the quality of the groundwater. For the same reasons that I rejected that argument earlier (*supra* Part III.C.1), I reject it here. *Cf.* CLI-04-33, 60 NRC at 588 (the Commission, having sustained the 9 pore volume figure in the Section 8 litigation, rejected the Intervenors' effort to rechallenge that figure in the context of their challenge to HRI's surety estimate for Section 8).

b. Contract Radiological Technicians

The Intervenors argue that HRI's decommissioning cost estimate is inadequate because it fails to include the costs of individuals to conduct radiological surveys (Intervenors' Written Presentation at 61). Relying on their expert, Gary R. Konwinski, they claim that although HRI's RAP includes cost data for ''surveys by staff,'' this does not take into account the possibility that HRI might not be operating the site at the time of closure (*ibid.*). They assert that because of this possibility, the RAP must include an estimate of the costs to hire trained individuals to conduct contamination surveys (*ibid.*) (citing Declaration of Gary R. Konwinski at 11-12 (Mar. 1, 2005) [hereinafter Konwinski Affidavit]).

HRI responds that Mr. Konwinski ignores the salary allocated for the Environmental Manager, which is included in the RAP (HRI's Response at 52). The Environmental Manager ''will perform a wide range of duties including having 'responsibility over radiological surveys and technician level responsibilities described for the [Radiation Safety Officer]' '' (*ibid.*). HRI asserts that, by budgeting for the salary of the Environmental Manager in addition to the Radiation Safety Officer, which is in accordance with its plan to share responsibilities among staff, it has fulfilled the cost requirement for conducting radiological surveys (*ibid.*). The NRC Staff agrees (NRC Staff's Written Presentation at 36-37).

HRI's RAP states that, in calculating the groundwater restoration budget, it assumed that employees in all positions ''are required to provide a multitude of services, i.e., every employee will be wearing multiple hats'' (Section 17 RAP at 2.6). It appears that Mr. Konwinski disregarded both HRI's assumption that employees would wear ''multiple hats'' and the fact that HRI budgeted not only for a Radiation Safety Officer, but also for an Environmental Manager. I find — given HRI's ''multiple hats'' assumption, and bolstered by the fact that it budgeted for the position of a Radiation Safety Officer *and* an Environmental Manager — that the Intervenors' concern regarding the adequacy of the cost estimate for radiological technicians lacks merit.

c. Section 11(e)(2) Byproduct Waste Disposal Costs

(i) The Intervenors claim (Intervenors' Written Presentation at 61) that HRI underestimated its disposal costs for section 11(e)(2) byproduct waste, which, as relevant here, is the waste ''produced by the extraction or concentration of uranium . . . from any ore processed primarily for its source material content'' (42 U.S.C. 2014(e)(2); 10 C.F.R. § 40.4). Part 40, Appendix A, Criterion 2, of 10 C.F.R. requires that byproduct material from ISL mining operations be disposed of at existing large mill tailings disposal sites, unless, given the nature of the waste and the costs and environmental impacts of transporting the waste, offsite disposal is impracticable or there are clear advantages to onsite burial. The Intervenors state that their expert, Mr. Konwinski, ''contacted several existing large mill tailings sites'' to determine the costs of disposal of byproduct waste, and he concluded that Utah's White Mesa Mill is the most likely site for HRI's disposal of its byproduct waste (Intervenors' Written Presentation at 62). Mr. Konwinski estimated — based on information received from White Mesa Mill — that the cost of byproduct waste disposal will be $125.00 per cubic yard, which is substantially higher than the $43.61 per cubic yard estimated by HRI in its RAPs (*ibid.*). Moreover, assuming that HRI disposes of its waste at White Mesa Mill, the Intervenors assert that HRI could easily exceed White Mesa's waste limitations, because White Mesa ''is currently limited to receiving 500 cubic yards of waste from each off-site waste generator,'' and the Intervenors allege that HRI will likely exceed this limit (*id.* at 62 n.20).

HRI responds that the Intervenors' challenge is flawed for three reasons. First, Mr. Konwinski's conclusion that HRI would likely use White Mesa Mill as a disposal site is based on incomplete information, because he evaluated only three disposal sites, and he failed to consider two other potential disposal locations, both of which could be used by HRI for disposal of section 11(e)(2) byproduct material (HRI's Response at 53). Second, Mr. Konwinski's calculation of costs is overstated, because it ignores that one of the disposal sites he failed to consider — Cotter Corporation — quotes a disposal fee of $50 per cubic yard (*id.* at 54). Third, Mr. Konwinski errs in stating that White Mesa Mill will accept only 500 cubic yards of waste per year from a single source; in fact, it accepts up to 5000 cubic yards per year (*ibid.*). In any event, HRI states that it may avail itself of more than one disposal site and, moreover, ''if necessary, facilities such as the White Mesa Mill are permitted to pursue license amendments from NRC or the relevant Agreement State to accept additional 11(e)(2) byproduct material wastes in excess of existing license conditions'' (*ibid.*).

The NRC Staff agrees with HRI that the Intervenors have not demonstrated any fatal deficiencies in HRI's cost estimates for disposal of section 11(e)(2) waste. The Staff declares that, contrary to the Intervenors' assertion, ISL mining facilities typically generate small quantities of byproduct material (NRC Staff's Written

Presentation at 38). Additionally, the Staff states that ''[b]ecause HRI does not anticipate generating any waste for some time, the estimates in the RAP are necessarily based on predictions of disposal costs, and quickly become outdated'' (*id.* at 37) (citing Affidavit of Richard A. Weller at 6 (Apr. 29, 2005) [hereinafter Weller Affidavit]). Significantly, the Staff notes that Mr. Konwinski's cost estimates were calculated using an incorrect figure for the cost per unit volume of waste disposal, and they failed to take into account the elapsed time since the cost estimates were submitted; ''[o]nce the cost estimates are properly calculated and updated to present value, HRI's cost estimates closely track Mr. Konwinski's estimates'' (NRC Staff's Written Presentation at 38) (citing Weller Affidavit at 9). Moreover, prior to lixiviant injection, HRI must obtain a waste disposal agreement and must also provide an updated RAP (NRC Staff's Written Presentation at 38).[21]

Based on the evidence and arguments submitted by HRI and the Staff, I conclude that HRI's section 11(e)(2) waste disposal estimates are reasonable. My confidence in these estimates, and the decommissioning surety that HRI will ultimately provide for waste disposal at Section 17, Crownpoint, and Unit 1, is buttressed by the fact that HRI's estimates will be updated prior to mining operations and annually thereafter (LC 9.5).

(ii) The Intervenors also advance a challenge to HRI's estimated waste disposal costs that is specific to Unit 1 and Crownpoint. HRI's cost estimates assume that the concrete floors and other materials of the Unit 1 and Crownpoint buildings will be decontaminated and thus not treated as waste. The Intervenors assert that this is an unlikely scenario, and that HRI's cost estimate should include costs for disposal of this material (Intervenors' Written Presentation at 64-65).

HRI responds that its experience rebuts the Intervenors' argument. Specifically, Mr. Pelizza states that HRI's parent company, URI, was able to decontaminate and decommission all scrap from buildings at its Kingsville Dome process facility, including the ''contaminated dryer enclosure [which] is arguably the most contaminated structure at the facility. Even so, all scrap was routinely decontaminated and . . . released for unrestricted use. Similarly, HRI plans that all buildings will be decontaminated at [its mining sites]'' (Pelizza Affidavit at 60). HRI states that the Intervenors provide no evidence that decontamination of its concrete floors and equipment is impossible (HRI's Response at 56). Finally, HRI points out that it is required to update its surety to reflect changes in its decontamination plans, and that it is also required to refine financial assurance cost

[21] The Affidavit of NRC Staff member Richard A. Weller makes clear that (1) HRI has several options for disposing of byproduct waste, and (2) the Staff has little concern about HRI's ability to obtain an agreement with a waste disposal facility (Weller Affidavit at 4-5). For HRI to have an agreement now would be ''premature'' because the need for such services ''is not anticipated for a number of years'' (*id.* at 6).

estimates immediately prior to commencement of uranium recovery operations, and also annually (*id.* at 56-57).

The Staff agrees that HRI need not revise its RAP to include estimated disposal costs of buildings and building-related materials. The Staff observes that HRI has ''several options for reducing or eliminating concrete contamination and concrete waste volume including concrete curbing, epoxy application, or concrete surface removal'' (NRC Staff's Written Presentation at 39; *see* Weller Affidavit at 6).

I agree with HRI and the Staff that HRI need not include the cost of disposal for concrete and building-related material in its cost estimates. Based on the Affidavits of Mr. Pelizza and Mr. Weller, I am satisfied that HRI's efforts at decontaminating this material will likely be successful. Moreover, HRI is required periodically to update its cost estimates, so if the waste removal cost estimates require adjustment based on future conditions not now apparent, they will be revised.

(iii) The Intervenors raise a challenge to HRI's section 11(e)(2) waste disposal estimates that is unique to Crownpoint. They argue that HRI failed to account for the cost of sludge removal and removal and disposal of sludge pond liners (Intervenors' Written Presentation at 65).

HRI does not directly address this issue in its written presentation, but the Staff presents the Affidavit of Mr. Weller, which states that — contrary to the Intervenors' assertion — HRI's RAP contains estimates for pond sludge and liner disposal costs (Weller Affidavit at 10). HRI specifically included $217,299 for pond sludge and liner disposal in its budget for surface reclamation (Crownpoint RAP, Attachment E-8-1).

The Intervenors' challenge is thus based on an incorrect premise and may be rejected.[22]

d. Onsite Packaging, Surveying, and Decontamination Costs Relating To Transport

The Intervenors assert that HRI failed to include, or underestimated, costs for the packaging of contaminated waste for transport (Intervenors' Written Presentation at 62). They also assert that HRI failed to include, or underestimated, the costs of contamination surveys of trucks transporting waste before their release

[22] The Intervenors assert that the Affidavit of their expert, Mr. Konwinski, ''identifies numerous other wastes for which HRI has not accounted in its Crownpoint RAP which is summarized in Table 3 of his testimony'' (Intervenors' Written Presentation at 65). Because the putative licensing deficiencies summarized in Mr. Konwinski's Affidavit are neither described nor developed in the Intervenors' Written Presentation, I decline to consider them (*see supra* note 14).

from the site, as well as costs of surveys of the containers and any necessary decontamination (*ibid.*).

HRI refutes the argument that packaging of section 11(e)(2) byproduct materials is necessary for transport (HRI's Response at 55). In his Affidavit, Mr. Pelizza states that he supervised the decommissioning of two commercial ISL plans, and although ''many truckloads'' of contaminated material were transported offsite, containers were not used (Pelizza Affidavit at 59). Rather, the contaminated material was ''always shipped in bulk because it is more efficient'' (*ibid.*). If contaminated material is ''drummed and stored onsite, it is standard procedure to empty the drums into bulk transports, and flatten the drums and ship them with the bulk material'' (*ibid.*).

The Staff likewise urges this Board to reject the Intervenors' packaging argument, based on HRI's prior experience with shipping waste in bulk (NRC Staff's Written Presentation at 38-39). The Staff also points out that the labor costs for onsite surveys and any necessary decontamination efforts are covered by the salaries of the Radiation Safety Officer and the Environmental Manager, which are already included in the RAP (*id.* at 38).

I find that HRI's estimates for packaging, surveying, and decontamination relating to the transport of contaminated material from the mining site are adequate. Based on the evidence submitted by HRI and the Staff, I conclude that (1) packaging of contaminated waste for shipment will probably not be necessary, and (2) to the extent HRI's RAPs include the salaries of the Radiation Safety Officer and the Environmental Manager, the costs for onsite surveys and decontamination efforts are covered.[23]

e. Disposal Site Surveys, Decontamination, and Unloading Charges

Finally, with respect to the RAP for Section 17, the Intervenors claim that HRI failed to include estimates for disposal site surveys, a decontamination wash, and unloading charges (Intervenors' Written Presentation at 63). The Intervenors rely on their expert, Mr. Konwinski, who states that an additional $12,000 should be

[23] My conclusion that HRI will likely be able to ship its contaminated waste in bulk is based on HRI's experience and the NRC Staff's approval of that practice. *Cf.* NUREG-1569 at 6-24 to 6-25 (assumptions used for proposed surety should, to the extent possible, be based on experience). To conclude that waste may be shipped in bulk is not to be equated with concluding that HRI may engage in transportation practices that will threaten the health and safety of the public or the environment. All shipments are subject to U.S. Department of Transportation requirements (10 C.F.R. § 71.5; FEIS at 2-23). Moreover, subject to the NRC Staff's vigilant oversight, HRI's Environmental Manager and Radiation Safety Officer will be responsible for developing, administrating, and enforcing a program that ensures the safe and secure transportation of waste (Consolidated Operations Plan at 131).

added to the waste disposal costs for the purposes of surveys, decontamination efforts, and unloading (Konwinski Affidavit at 11, 15).

As the Staff observes (NRC Staff's Written Presentation at 39), HRI does not directly respond to this claim by the Intervenors. The Staff notes that although costs for ''unloading time'' and ''additional decontamination costs'' were included in the sample byproduct agreement submitted with the RAP, ''*it is unclear whether these costs are included in HRI's cost estimate*'' (*ibid.* (emphasis added)). Assuming that the $12,000 is not included in HRI's decommissioning cost estimate, the Staff nevertheless urges this Board to ''reject'' the Intervenors' request to revise the RAP, because ''these costs, if incurred, are relatively insignificant in light of the overall surety estimate'' (*ibid.*). The Staff's argument is misguided.

HRI is required to establish financial surety arrangements ''to carry out the decontamination and decommissioning of the . . . site'' (10 C.F.R. Part 40, Appendix A, Criterion 9). The record shows that HRI views costs for disposal site ''unloading time'' and ''decontamination'' as material to site decommissioning, else it would not have included them in the sample byproduct agreement submitted with the RAP. I believe HRI is quite correct in that view. Accordingly, those costs should be included in HRI's cost estimate.

Significantly, the NRC Staff does not argue that these costs were correctly omitted. Rather, it characterizes this $12,000 omission as ''relatively insignificant,'' and it invites this Board to disregard HRI's lapse in failing to include it (NRC Staff's Written Presentation at 39). In my judgment, the omission of a material cost estimate of $12,000 does not fall into the category of ''relatively insignificant.'' Moreover, the rule that the Staff asks this Board to apply — i.e., to ignore small but material errors in surety arrangements — is unsupported in law and would be problematic in application. Accordingly, I direct HRI to revise its RAP to include the cost estimate for disposal site unloading, surveys, and decontamination.

D. The Intervenors' Assertion That HRI Failed To Demonstrate That Drinking Water Supplies Will Be Adequately Protected from Uranium Contamination Lacks Merit

1. Section 17

a. The Intervenors' Assertion That HRI Failed To Show That the Westwater Aquifer Is Homogeneous and Contained by an Underlying Aquitard Is Barred by the Law of the Case Doctrine

The Intervenors assert that HRI's license to mine Section 17 should be invalidated because HRI has failed to show that drinking water supplies will be protected. First, they argue that the Westwater Aquifer is heterogeneous — that

is, it is composed of small-scale channels of high permeability — and that the channels will act as conduits for the accelerated lateral transport of contaminants to drinking water sources (Intervenors' Written Presentation at 73-76). Second, they argue that the Recapture Aquitard does not underlie the Westwater Aquifer at Section 17 and, accordingly, contamination from HRI's mining operations will be transported to the Cow Springs Aquifer (a drinking water source) that underlies the Westwater Aquifer (*id.* at 77-80). These issues, however, have already been considered and rejected in this case with respect to mining operations at Section 8, *which is adjacent to the Section 17 site.* As discussed below, because the Intervenors fail to provide any persuasive reason why the conclusions reached by the then-Presiding Officer and left undisturbed by the Commission with regard to Section 8 do not also apply to Section 17, they are foreclosed by the law of the case doctrine from relitigating them.

First, the hydrogeology of the Westwater Aquifer has been extensively litigated. The Intervenors argued earlier in this proceeding (LBP-99-30, 50 NRC at 84-86) — as they argue now (Intervenors' Written Presentation at 73-74) — that the Westwater Aquifer is heterogeneous, consisting of stacked sand channels of high permeability that will allow the rapid excursion of mining contaminants to adjacent drinking water sources. But the then-Presiding Officer squarely rejected this theory, finding that: (1) ''[o]n a broad scale, that of the proposed mining operation, the Westwater may be approximated as homogeneous'' (LBP-99-30, 50 NRC at 85); and (2) ''the Westwater does not contain channelways'' that would allow the accelerated excursion of contaminants outside the mining area (*id.* at 86). The Presiding Officer explained (*id.* at 85, 88) (citations and footnotes omitted):

> The considerable literature on the Westwater demonstrates that it consists predominantly of sandstone which contains discontinuous clay horizons formed by fluvial deposition. . . .
>
> * * * *
>
> On a small scale, groundwater flow in the Westwater is complicated, just as water flow through a filter is complicated on a very small scale. But on a larger scale the Westwater may be treated as homogeneous . . . . By homogeneous . . . , what is meant here is that groundwater will flow downgradient at about the same velocity in different parts of the Church Rock area.
>
> I agree with HRI expert Bartels that if lengthy channelways exist at Church Rock, they should occur in other ISL uranium sites which have a very similar fluvial environment. . . . Channelways have not been reported elsewhere, . . . nor do the Intervenors provide evidence of them.

The Presiding Officer thus concluded that the Intervenors' characterization of the Westwater Aquifer as a heterogeneous environment containing lengthy

channels of high permeability was ''without basis'' (LBP-99-30, 50 NRC at 88), because it was: (1) inconsistent with seismic studies at Church Rock (*id.* at 85); (2) inconsistent with or unsupported by technical literature (*ibid.*); and (3) based on a flow and transport model that included a ''totally unreasonable assumption'' (*ibid.*). The Commission declined to disturb that conclusion, finding that the Intervenors' challenges were ''unpersuasive'' (CLI-00-12, 52 NRC at 3). The Intervenors fail to provide a convincing reason to revisit that conclusion. Their argument is therefore barred by the law of the case doctrine.[24]

Likewise barred by the law of the case doctrine is the Intervenors' assertion that the Recapture Aquitard does not underlie the Westwater Aquifer at Section 17 and, accordingly, that mining contaminants will be transported to the Cow Springs Aquifer (a drinking water source) that underlies the Westwater Aquifer. This is precisely the same argument they previously made, when they asserted that ''the Recapture [Aquitard] is thin or missing in the area of Church Rock . . . [and therefore] the Cow Springs Aquifer 'comes into nearly direct contact with the Westwater' '' (LBP-99-30, 50 NRC at 89). The Presiding Officer had no difficulty rejecting this argument (*id.* at 90) (citations and footnotes omitted):

> Many drill holes penetrated the Recapture [Aquitard] to varying degrees, and in every case its characteristics are those of an aquitard. The Recapture [Aquitard]

---

[24] The Intervenors cannot avoid the law of the case doctrine by relying here, as before, on technical literature that characterizes the Westwater at Section 17 ''on a local scale [as] lithologically heterogeneous'' (Intervenors' Written Presentation at 75). The Intervenors ignore that the *same* literature reveals that the Westwater is ''a fairly pure sandstone, albeit cross-bedded and scoured, and may . . . be regarded as generally homogeneous'' (LBP-99-30, 50 NRC at 87). The Intervenors thus fail to show that the technical literature is inconsistent with the former Presiding Officer's finding that ''[o]n a broad scale, that of the proposed mining operation, the Westwater may be approximated as homogeneous'' (*id.* at 85). Nor can the Intervenors avoid the law of the case doctrine by relying on manifestly flawed studies to construct arguments that are wholly insubstantial and, thus, not colorable. *Cf. Steel Co. v. Citizens For a Better Environment,* 523 U.S. 83, 89 (1998) (a federal claim is not colorable if it is so ''insubstantial, implausible, foreclosed by prior decisions of [this] Court, or otherwise completely devoid of merit as not to involve a federal controversy'' (internal quotation marks omitted)). Even if the Intervenors' arguments were colorable, they lack merit (*infra* Part III.D.1.b).

In their Written Presentation (at 76 n.21), the Intervenors also assert that the 400-foot spacing between monitor wells that is provided by LC 10.17 ''is insufficient to detect contaminants flowing through the small scale sand channels in the Westwater.'' This argument, too, is barred by the law of the case doctrine, because the Presiding Officer previously found that ''[b]ased on these characteristics [of the Westwater Aquifer], there seems little chance that monitor wells spaced 400 feet apart would miss an excursion in this environment'' (LBP-99-30, 50 NRC at 87-88), and the Commission found that the Intervenors failed to identify a factual finding or legal conclusion that required correction (CLI-00-12, 52 NRC at 3). In any event, I find that the record supports the conclusion that HRI will install adequate monitor wells. *See, e.g.,* Pelizza Affidavit at 33-34; Cohen Affidavit at 23.

> appears to be present throughout Section 8, as reported by Staff in the FEIS and HRI. . . .
>
> HRI's expert, Lichnovsky . . . offers evidence . . . that the Cow Springs sandstone does not intertongue with the Recapture [Aquitard] at the site. . . .
>
> [The Intervenors' expert] Lucas points out that . . . ''the Recapture [Aquitard] . . . is a fluvial deposit in the southern part of the San Juan Basin.'' Condon and Peterson . . . agree with this, [and] point out that it contains sandstone, claystone, mudstone, and siltstone, in agreement with HRI and Staff. I therefore find that it is an aquitard, separating the Westwater from the Cow Springs aquifer . . . .

The Commission declined to disturb the Presiding Officer's conclusion that the Recapture Aquitard has the characteristics of an aquitard and separates the Westwater and Cow Springs Aquifers in the area of Church Rock (CLI-00-12, 52 NRC at 3). The Intervenors' failure to explain why the size or characteristics of this regional aquitard would vary between the mining site at Section 8 and the adjacent mining site at Section 17 precludes them from revisiting that issue.

b. The Intervenors' Assertions That HRI Failed To Show That the Westwater Aquifer Is Homogeneous and Contained by an Underlying Aquitard Lacks Merit in Any Event

There is no merit, in any event, to the Intervenors' assertion that the Westwater Aquifer at Section 17 is not homogeneous. They once again argue the existence of channels in the Westwater that ''have permeability and porosity characteristics that accelerate groundwater flow'' and will allow uncontrolled excursions of pregnant lixiviant outside the mining area (Intervenors' Written Presentation at 76). As stated above, the former Presiding Officer squarely rejected this argument, ruling that the claim that ''sand channels in the Westwater function as 'pipelines' is without basis'' (LBP-99-30, 50 NRC at 88).

The Intervenors now rely on studies of an outcrop analogue by Dr. Spencer G. Lucas to support their channel theory (Intervenors' Written Presentation at 75-76). An outcrop analogue is a geologic unit — here the Westwater sandstone — that is exposed to the surface and is geographically close to or geologically similar to the rock unit where the mining will occur. The outcrop analogue here is ''3-4 miles'' from Section 17 (*id.* at 76), and Dr. Lucas states that his examination of the outcrop supports a conclusion that the Westwater Aquifer is ''locally heterogeneous, characterized by 'numerous, interlaced ribbon-like sandstone bodies' . . . [that will] act as easy, rapid conduits for groundwater flow'' (*ibid.; see* Declaration of Dr. Spencer G. Lucas at 27 (Feb. 25, 2005) [hereinafter Lucas Affidavit]).

Notably, NRC Staff expert William von Till does not dispute that ''studying outcrops can be very useful . . . [for] describ[ing] the lithology of the rock units in

question . . . at the locations'' of the particular outcrop (Affidavit of William von Till at 6 (Apr. 29, 2005) [hereinafter von Till Affidavit]). But he vigorously, and persuasively, states that ''site specific pump test data and geophysical logs are the best tools for purposes of determining how geologic units will behave under groundwater hydrodynamic flow conditions in an ISL mining operation'' (*ibid.*). Moreover, he points out that Dr. Lucas — in focusing on the outcrop — ''fails to address . . . the more important aspect here of how the Westwater . . . behaves from a groundwater and hydrodynamic flow standpoint'' (von Till Affidavit at 12). As Mr. von Till explains (*id.* at 12-13) (citations omitted):

> Dr. Lucas does not address the pump tests results showing that on a larger-scale hydrodynamic groundwater flow perspective, the Westwater . . . behaves in a homogeneous manner. In the ISL mining context here, this hydrodynamic behavior of groundwater flow in the Westwater . . . is the key factor . . . .
>
> * * * *
>
> Mark Pelizza, on behalf of HRI, addressed these issues in detail when he discussed the Southtrend pump test data . . . generated in January 1992 at Mobil's Section 9 site. This pump test demonstrated radial flow, and the results do not suggest any influence by channels, in my opinion. Data from this pump test can be correlated to the conditions at Church Rock for the Westwater . . . .
>
> Dr. Lucas provides no basis for his conclusion that heterogeneity in the Westwater . . . ''will accelerate groundwater flow, inhibiting containment of lixiviant.'' Throughout his affidavit, Dr. Lucas uses only traditional geology arguments without addressing hydrogeologic information generated by pump tests. Such information is the most important tool available to determine hydrodynamic flow within the Westwater . . . .

See also Pelizza Affidavit at 36-37 (interpreting stratigraphic cross sections of Church Rock site and finding no evidence ''that would support the claim of a conduit for preferential flow of groundwater''); Lichnovsky Affidavit at 19 (Westwater Aquifer acts hydrologically as a homogeneous unit because it ''was deposited as sheet sandstone, with each sheet overlying and scouring into another sheet. These sandstone sheets are coalesced and amalgamated into [a] thick sandstone's body that functions hydrologically as one unit'').

HRI expert Dan W. McCarn provides compelling support for the commonsense conclusion that no outcrop study, by itself, can tell a geologist the hydrodynamic behavior of an aquifer that is several miles away and ''covered by thousands of feet of rock. Outcrops are useful, but drilling is absolutely essential'' (Declaration of Dan W. McCarn at 10 (Apr. 15, 2005) [hereinafter McCarn Affidavit]; *accord* Lichnovsky Affidavit at 7). As NRC Staff expert Stephen Cohen confirms, regardless of the physical appearance of the outcrop examined by Dr. Lucas, the Westwater Aquifer ''responds as a homogeneous aquifer hydraulically. . . .

[T]he notion that subsurface channels are influencing groundwater flow is simply incorrect'' (Cohen Affidavit at 19-20) (citing several studies).

I therefore reject the Intervenors' invitation to rely on Dr. Lucas's outcrop study for purposes of determining hydrodynamic flow in the Westwater Aquifer, and I find that the record supports the conclusion that, for purposes of mining operations, the Westwater Aquifer at Church Rock (including Section 17) behaves as a homogeneous aquifer.

Similarly, I reject the Intervenors' argument that Dr. Lucas's outcrop study reveals that the Westwater Aquifer at Section 17 is not contained by the underlying Recapture Aquitard and, consequently, contaminants from mining operations will migrate from the Westwater Aquifer to the underlying Cow Springs Aquifer (Intervenors' Written Presentation at 77-78; Lucas Affidavit at 13). Dr. Lucas's conclusion is refuted by convincing record evidence.

As HRI expert, Frank Lichnovsky, states, mine geologists and engineers do not make mine-planning decisions based on outcrops, which provide ''weathered and therefore altered information of the sediments present'' (Lichnovsky Affidavit at 7). Moreover, such outcrops do not reveal the ''lateral extent of the sediments or whether they pinch-out or thicken in the subsurface downdip of the outcrop'' (*id.* at 7-8).

Instead of relying on outcrops, mine geologists and engineers drill numerous exploration holes at each mine site, and each drill hole furnishes data for a geophysical log that ''provides information on the types of rocks, their relationship to one another, and allows mapping of their aerial extent and thickness'' (Lichnovsky Affidavit at 7). Additionally, ''[s]amples of drill cutting are taken during drilling and provide details such as the coarseness of the sand and the type of rock being drilled. The drilling rate also provides information on the lithologies. The drilling rate is slower in mudstone, cemented sandstone, or limestone, while the drilling rate is faster in friable sandstone'' (*ibid.*). The geophysical drill hole logs record the lithology of the subsurface rocks at the actual mine site, and ''[b]y correlating the geophysical logs and constructing cross sections, the extent and continuity of the confining layers can be mapped'' (*id.* at 9; *see also* Pelizza Affidavit at 40-42; von Till Affidavit at 11).

I agree with HRI and the NRC Staff that the data from HRI's drill holes and geophysical logs are more reliable and informative than outcrop studies for determining the existence of confining layers. I further agree with HRI and the NRC Staff that HRI's drill holes and geophysical logs demonstrate the presence of the Recapture Aquitard beneath the Westwater Aquifer at the Section 17 mine site (Lichnovsky Affidavit at 13). *See also id.* at 9-12; Cohen Affidavit at 34 (confirming that HRI drilling and geophysical logs for Section 17 reveal the presence of the Recapture Aquitard beneath the Westwater Aquifer); *id.* at 36 (''independent analyses of boring and geophysical logs . . . clearly show that the Recapture is present in . . . the Church Rock . . . area[ ]''); von Till Affidavit at 6

(''NRC Staff stated in the FEIS that 'the Recapture Member is at least 45 [meters] (150 feet) thick in the mine area and overlies the Cow Springs Sandstone' ''); LBP-99-30, 50 NRC at 90 (''[m]any drill holes penetrated the Recapture Shale to varying degrees, and in every case its characteristics are those of an aquitard''). I thus conclude that, contrary to the Intervenors' assertion, the likelihood of vertical excursions of lixiviant from the Westwater Aquifer to the Cow Springs Aquifer at Section 17 is remote.

The Intervenors nevertheless persist in their assertion that the Recapture Aquitard will not prevent vertical excursions of lixiviant to the Cow Springs Aquifer, arguing that HRI misinterpreted the geophysical logs for Section 17. They claim that what HRI identifies as the Recapture Aquitard is, in fact, the ''sandstone of the upper Cow Springs [Aquifer]'' (Intervenors' Written Presentation at 79). I am not persuaded by this argument. The Intervenors' interpretation of the geophysical log focuses on only one of its relevant aspects, and in failing to take into account other relevant aspects of the log — in particular, the Resistivity curve — the Intervenors' interpretation founders (von Till Affidavit at 9). As NRC Staff expert, William von Till, states, ''[w]hen comparing the Recapture Member and the Cow Springs [Aquifer] . . . one must also look at the Resistivity curve. The change in Resistivity at the intersection between the Recapture Member and Cow Springs [Aquifer] supports [HRI's] interpretation'' that the Recapture Aquitard is 169 feet thick (*id.* at 9-10). The Intervenors' contrary interpretation thus lacks merit. *See also* Lichnovsky Affidavit at 9-11; Pelizza Affidavit at 41; FEIS at 3-18, 3-35, 4-19.[25]

Moreover, that the Westwater Aquifer at Section 17 is vertically confined is to be confirmed by groundwater pump tests that HRI must perform prior to injecting lixiviant at a mine site (*supra* Part III.B.2.b). Notably, the Intervenors' own expert, Michael G. Wallace, agrees that groundwater pump tests ''are the most commonly used assessment tool to determine if there is a hydraulic connection between the mine zone and overlying aquifer'' (Declaration of Michael G. Wallace at 25 (Mar. 1, 2005) [hereinafter Wallace Affidavit]). As NRC Staff expert, Mr. von Till, explains (von Till Affidavit at 7-8):

> [C]ollecting site-specific stratigraphic and pump test data — at the location of ISL mining — are the best methods of determining whether a hydraulic connection is present between the Westwater [Aquifer] and the [Dakota and Cow Springs Aquifers], and that the license conditions set forth [in LC 10.23 (requiring ground-

[25] The NRC Staff notes that the Intervenors, once again, failed to mention in their Written Presentation additional related opinions expressed by their expert (NRC Staff's Written Presentation at 46 n.15). Although the Staff, in a commendable exercise of its responsibilities, addressed and rebutted such opinions, I decline to consider them given that the Intervenors neither developed nor affirmatively relied upon them (*see supra* notes 14, 22).

water pump tests), LC 10.25 (requiring the placement of monitor wells in the Cow Springs Aquifer to determine if a vertical connection exists with the Westwater Aquifer), and LC 10.32 (requiring the establishment of baseline parameters in the Cow Springs Aquifer prior to mining, and groundwater pump tests at each mining site to confirm it is hydraulically confined from the Westwater Aquifer)] adequately ensure that such data will be collected.

Furthermore, HRI will monitor for vertical lixiviant excursions during mining operations, and evidence of an excursion will require immediate corrective action (*supra* Part III.B.2.b; Cohen Affidavit at 34).

Finally, the Intervenors make the perfunctory assertion that the outcrop shows that the Dakota Aquifer ''sits directly on top of the Westwater [Aquifer]'' (Intervenors' Written Presentation at 77), thus intimating that the Brushy Basin Aquitard does not separate the two aquifers. This assertion lacks merit. First, as discussed above, outcrops can provide incomplete and inaccurate information regarding the underground geology. Moreover, HRI expert Mr. Lichnovsky explains why this particular outcrop erroneously suggests that the Dakota Aquifer sits directly atop the Westwater Aquifer; namely, the outcrop ''lies with angular unconformity on the Morrison rocks in the Church Rock area,'' and any absence of the Brushy Basin Aquitard ''represents simple erosional planation of the Mesozoic strata that was tilted north prior to deposition of the Dakota'' (Lichnovsky Affidavit at 15). I find that HRI's data — including its geophysical logs — shows the presence of the Brushy Basin Aquitard above the Westwater Aquifer at the Section 17 mine site (*id.* at 8, 13-16; *see also* von Till Affidavit at 10-11; Pelizza Affidavit at 41; FEIS at 3-18).

2. Unit 1

HRI and the NRC Staff have concluded that the Westwater Aquifer at the Unit 1 mine site — like the Westwater Aquifer at Section 17 — is homogeneous and vertically confined by the Recapture and Brushy Basin Aquitards. The Intervenors disagree. They argue that (1) HRI's pump tests for Unit 1 show that the Westwater is heterogeneous (Intervenors' Written Presentation at 81), and (2) an outcrop analogue study for Unit 1 shows no vertical confinement (*id.* at 83-84). I am unpersuaded by the Intervenors' arguments.

First, the Intervenors argue that HRI — in concluding that the Westwater Aquifer at Unit 1 is homogeneous — misinterpreted a contour map that was based on data from a pump test conducted by Mobil. The Intervenors' expert Mr. Wallace claims that an aquifer is ''likely'' to be heterogeneous if the contour map ''is not perfectly circular'' (Wallace Affidavit at 16). Because HRI's contour map for Unit 1 is not *perfectly* circular, Mr. Wallace concludes that the Westwater Aquifer there is heterogeneous (*ibid.*)

NRC Staff expert Mr. Cohen disputes that homogeneous aquifers usually appear as perfect circles on contour maps. In his experience, a homogeneous aquifer ''rarely'' appears as a perfect circle ''because of natural heterogeneities in aquifer material'' (Cohen Affidavit at 32). As Mr. Cohen explains,

> [u]nder most real-world isotropic conditions — in which hydraulic conductivity is assumed to be the same in all directions — [contour maps] are usually sub-circular or slightly eliptical rather than perfectly circular. Cones of depression more elliptical in shape are indicative of anisotropic conditions (hydraulic conductivity is different in different directions). However, anisotropy does not necessarily indicate that channels exist; rather, it indicates heterogeneities in aquifer materials [*id.* at 28].

Most important, for present purposes, Mr. Cohen states that ''a sub-circular [contour map] such as that presented [by HRI is] highly representative of a homogeneous aquifer'' (*id.* at 32). He thus concludes that the aquifer response presented in HRI's contour map ''is quite homogeneous for a real-world pumping test'' (*ibid.*). I find Mr. Cohen's interpretation of HRI's contour map, and his conclusion that the Westwater Aquifer at Unit 1 is homogeneous — which is supported by HRI (*see* Pelizza Affidavit at 36-38) — to be credible and convincing. I therefore reject the Intervenors' contrary argument.[26]

Similarly, I reject the Intervenors' argument (Intervenors' Written Presentation at 83-84) that an outcrop analogue study for Unit 1 shows that the Westwater Aquifer there is not vertically confined. First, as discussed above (*see supra* pp. 118-20), an outcrop may be altered due to many years of exposure and, accordingly, does not necessarily provide accurate information regarding underground geology. Second, the particular outcrop on which the Intervenors rely is some 15 miles away from the mining site (Lucas Affidavit at 11) and, therefore, may not be representative of the actual mining site geology. Third, adequate record evidence supports the conclusion that the Westwater Aquifer is vertically confined at Unit 1. *See* Pelizza Affidavit at 41-42; FEIS at 3-31. Finally, LC

---

[26] Using a groundwater flow and transport model, the Intervenors also calculate that mining contaminants from Unit 1 could reach the municipal wells in Crownpoint within 63 years (Intervenors' Written Presentation at 82-83), rather than the 2616 years calculated by HRI and the NRC Staff (FEIS at 3-28). I find that the Intervenors' calculation is flawed, because — in addition to being based on the erroneous premise that the Westwater Aquifer at Unit 1 is heterogeneous (Intervenors' Written Presentation at 83) — it is based on data ''that is clearly unsubstantiated by literature and HRI's data'' (Cohen Affidavit at 29). Even if the Intervenors' figure of 63 years were correct, it would be of little consequence because: (1) if an excursion occurs during mining operations, HRI will take immediate corrective action (LC 9-13); and (2) any toxic elements dissolved in the groundwater would likely reprecipitate close to the mining area (*supra* Part III.C.2; Pelizza Affidavit at 30). I note, moreover, that this would be a moot point if HRI begins mining operations at Crownpoint prior to or contemporaneously with Unit 1, because prior to commencing mining operations at Crownpoint, HRI must move the Crownpoint municipal wells to a more distant location (LC 10.27).

10.23 requires pump testing before the injection of lixiviant, which will confirm the vertical containment status of the Westwater Aquifer at Unit 1 prior to the commencement of mining operations (von Till Affidavit at 5, 10).

3. Crownpoint

The Intervenors argue that HRI failed to demonstrate that drinking water supplies will be adequately protected from mining contaminants at Crownpoint because (Intervenors' Written Presentation at 85-87): (1) the Westwater Aquifer at Crownpoint is heterogeneous, containing channels that will allow the rapid lateral transport of contaminants outside the mining area; (2) the outcrop analogue study conducted by Dr. Lucas reveals that the Westwater Aquifer at Crownpoint is not vertically contained; and (3) Mr. Wallace produced a groundwater flow and transport model that, assuming the Westwater Aquifer at Crownpoint is heterogeneous, calculated mining contaminants from Crownpoint would reach Crownpoint Municipal wells in about 7 years, rather than the 178 years calculated by HRI and the NRC Staff. Having already addressed these concerns with regard to Section 17 and Unit 1, I find them likewise without merit as to Crownpoint. HRI has demonstrated that drinking water supplies will be adequately protected from mining contaminants at Crownpoint. *See, e.g.,* Pelizza Affidavit at 31, 34-37, 42; Cohen Affidavit at 30-31; von Till Affidavit at 14; FEIS at 4-15 through 4-26.[27]

Finally, the Intervenors argue that HRI failed to show that the Westwater and Dakota Aquifers are not connected at Crownpoint, because (Intervenors' Written Presentation at 87-89): (1) HRI's pump test was not properly designed and therefore failed to produce reliable results; and (2) HRI's pump test results suggest a connection between the two aquifers. I find these arguments to be insubstantial. First, NRC Staff expert, Stephen Cohen, and HRI expert, Craig Bartels, persuasively rebut the Intervenors' assertion that HRI's pump test failed to produce reliable results (Cohen Affidavit at 30; Bartels Affidavit at 46-47). Additionally, I find — based on the Affidavits of Mr. Cohen and Mr. Bartels — that the pump test reveals that the Westwater and Dakota Aquifers are hydrologically separated (Cohen Affidavit at 30-31; Bartels Affidavit at 46-49; *see also* Pelizza Affidavit at 42). This conclusion is confirmed by: (1) a 1982 pumping test near the Crownpoint site that ''showed no hydraulic connection between the Westwater . . . and Dakota Aquifers (Cohen Affidavit at 31); (2) a technical research paper stating that the Westwater Aquifer is a ''continuous aquifer confined between two units of low permeability'' (*ibid.*); and (3) a 5-year

[27] The Intervenors' assertion that mining contaminants from Crownpoint may reach the Crownpoint municipal wells not only is insubstantial (*see supra* note 26), it is disingenuous, because it fails to acknowledge that LC 10.27 requires HRI, in an abundance of caution, to move the Crownpoint municipal wells to a more distant location prior to commencing mining operations at Crownpoint.

comparison of water levels between two ''twin'' wells at Crownpoint — one in the Westwater Aquifer and the other in the Dakota Aquifer — that indicates that the two aquifers are hydrologically isolated (Bartels Affidavit at 51-52).

IV. CONCLUSION

For the foregoing reasons, I find — with the concurrence of Special Assistants Dr. Richard Cole and Dr. Robin Brett — that HRI met its burden of proof to demonstrate that the Intervenors' challenges relating to groundwater protection, groundwater restoration, and surety estimates do not provide a basis for invalidating HRI's license to perform ISL uranium mining at Section 17, Crownpoint, and Unit 1. However, in accordance with Part III.A, *supra,* HRI's license shall be revised to reduce the secondary groundwater restoration standard for uranium from 0.44 mg/L to 0.03 mg/L. Additionally, in accordance with Part III.C.3.e, *supra,* HRI's Restoration Action Plan shall be revised to include a cost estimate for expenses associated with disposal site unloading, surveying, and decontamination.

Pursuant to 10 C.F.R. §§ 2.786(b) and 2.1253, a party wishing to challenge this Decision before the Commission must file a petition for review within 15 days after service of this Decision. Any other party to this proceeding may, within 10 days after service of a petition for review, file an answer supporting or opposing Commission review (*id.* § 2.786(b)(3)). The filing of a petition for review is mandatory for a party seeking to exhaust its administrative remedies before seeking judicial review (*id.* §§ 2.786(b)(1) and 2.1253). If no party files a petition for review of this Decision, and if the Commission does not *sua sponte* review it, this Decision constitutes the final action of the Commission 30 days after its issuance (*id.* § 2.1251(a)).

It is so ORDERED.

BY THE PRESIDING OFFICER[28]

E. Roy Hawkens
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 20, 2005

[28] Copies of this Partial Initial Decision were sent this date by Internet e-mail or facsimile transmission to all participants or counsel for participants.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Alan S. Rosenthal, Chairman
Dr. Richard F. Cole
Dr. Charles N. Kelber

In the Matter of **Docket No. 50-29-OLA**
(ASLBP No. 04-831-01-OLA)
(License Termination Plan)

YANKEE ATOMIC ELECTRIC COMPANY
(Yankee Nuclear Power Station) **July 21, 2005**

In this 10 C.F.R. Part 50 proceeding regarding the application of Yankee Atomic Electric Company for agency approval of a license termination plan (LTP) for its Yankee Nuclear Power Station located in Rowe, Massachusetts, following a Commission order affirming the Licensing Board's grant of the hearing request of Intervenor Citizens Awareness Network (CAN), CLI-05-15, 61 NRC 365 (2005), and a June 30, 2005 Board request to the parties to identify the genuine issues of material fact that remained for adjudication in light of the Commission's order, the parties submitted a joint motion for approval of a settlement agreement. With this Memorandum and Order, the Board approves the settlement agreement and terminates the proceeding.

MEMORANDUM AND ORDER
(Approving Settlement Agreement and Terminating Proceeding)

This license amendment proceeding is addressed to the application of the Yankee Atomic Electric Company (Yankee) for NRC approval of a license termination plan (LTP) for its Yankee Nuclear Power Station located in Rowe, Massachusetts. In response to a *Federal Register* notice of opportunity for hearing, Citizens Awareness Network (CAN) sought to obtain a hearing on the basis of six contentions that asserted broadly that there had not been compliance with a Commission regulation pertaining to the required content of LTPs. Finding that CAN had the requisite standing and that several of its contentions satisfied the admission requirements imposed by the governing Rule of Practice, the Board granted the CAN hearing request last November 22 in LBP-04-27, 60 NRC 539 (2004).

Albeit on different grounds, both Yankee and the NRC Staff appealed this action. On June 29, 2005, in CLI-05-15, 61 NRC 365, the Commission affirmed the grant of the hearing request. In doing so, however, it noted (61 NRC at 381) that ''this case may have become somewhat overtaken by events'' occurring while the appeals were under submission. As a result of supervening developments, the Commission opined, ''the Board may be faced with summary disposition motions.'' *Id.* at 382.

Taking its cue from this observation, the Board issued an unpublished order the following day in which it called upon each of the parties to furnish it with a memorandum setting forth the genuine issues of material fact that, in light of the teachings of CLI-05-15, the party believed to remain for adjudication. The Board also indicated that, should a party conclude that no such issues remained, it could instead file a motion for summary disposition.

In response to the June 30 order, Yankee and CAN pursued a third course. On July 11, those parties filed a Joint Motion for Approval of Settlement Agreement and Termination of the Proceeding. Attached to the motion was the settlement agreement and a proposed order approving it and terminating the proceeding.

Given that the text of the settlement agreement is appended to this Order, there is no need to set forth its terms here. It suffices to record the Board's belief that the agreement entirely accords with the public interest and is in furtherance of the Commission's policy encouraging the ''fair and reasonable settlement and resolution of issues'' such as those that were raised by CAN in this proceeding. *See* 10 C.F.R. § 2.338. That being so, both parties to the Settlement Agreement are to be commended.

For the reasons stated, the Settlement Agreement appended to this Order is hereby *approved* and the proceeding *terminated* as now moot.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD[1]

Alan S. Rosenthal, Chairman
ADMINISTRATIVE JUDGE

Dr. Richard F. Cole
ADMINISTRATIVE JUDGE

Dr. Charles N. Kelber
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 21, 2005

[1] Copies of this Memorandum and Order were sent this date by Internet electronic mail transmission to counsel for the parties.

EXHIBIT 1

SETTLEMENT AGREEMENT

WHEREAS, Citizens Awareness Network (''CAN'') has requested and been granted a hearing before the Atomic Safety and Licensing Board (''Board'') relating to certain matters concerning Yankee Atomic Electric Company's (''Yankee'') application for Nuclear Regulatory Commission (''NRC'') approval of a License Termination Plan (''LTP'') for the Yankee Nuclear Power Station (''YNPS''), located at Rowe, Massachusetts, Docket No. 50-29 (''NRC Proceeding'');

WHEREAS CAN and Yankee have determined that it is in the public interest to seek dismissal of the admitted CAN contentions (Contentions 2, 3, and 4), regarding the completeness of the NRC required radiological characterization for YNPS and the alleged lack of a groundwater remediation plan in the LTP, because these contentions are now moot;

WHEREAS CAN and Yankee have agreed that because all the admitted contentions are now moot, this proceeding should be terminated;

THEREFORE, IT IS STIPULATED AND AGREED by CAN and Yankee that:

1. CAN and Yankee admit that the NRC has jurisdiction over the parties and the subject matter of this Settlement Agreement.

2. CAN agrees that CAN's Contentions 2, 3, and 4, as admitted by the Board, regarding the completeness of the characterization for YNPS and the alleged lack of a groundwater remediation plan in the LTP, are now moot and all matters otherwise required to be adjudicated have been resolved by this Settlement Agreement and the Consent Order issued by the Board.

3. CAN further agrees that as a result of this agreement the NRC proceeding on the contentions should be terminated.

4. Yankee agrees to provide CAN, CAN's attorney, Jonathan Block, and expert, Robert Ross, all hydrogeological reports developed to satisfy Federal and State requirements. Draft reports will not be provided unless necessary for understanding the final reports. Yankee also agrees to provide reimbursement for any work done for CAN by Mr. Ross, up to, but not exceeding, $1000.00 in the aggregate in fees related to providing CAN with an expert assessment of the hydrogeological issues in the EA and documents Yankee provides to CAN in performing this agreement. Mr. Ross will invoice Yankee directly for reimbursement of such fees.

5. Yankee agrees that a CAN representative will maintain its seat on the Community Advisory Board (''CAB'') as long as it stays in existence.

6. Yankee hereby provides assurance to CAN that Yankee will perform down gradient offsite monitoring of the groundwater for tritium which will be conducted off the YNPS industrial site; specifically employing monitoring wells as necessary to meet Federal and State requirements. The offsite monitoring wells currently being used are described in Attachment A to this Exhibit 1. Attachment B to this Exhibit 1 provides the location of these wells.

7. Yankee hereby provides assurance to CAN that this monitoring will continue for such period as mandated by Federal and State requirements.

8. Yankee hereby provides assurance to CAN that the down gradient offsite monitoring of the groundwater for tritium will be conducted to demonstrate that the Environmental Protection Agency's Maximum Contaminants Level (''EPA MCL'') standards are met, as is consistent with the YNPS LTP.

9. Yankee hereby provides assurance to CAN that this down gradient offsite monitoring will resume following completion of site demolition activities, anticipated to be completed in the fall of 2005.

10. All parties hereto agree to exercise due diligence in the performance of their various responsibilities under this Settlement Agreement and to cooperate with each other in carrying out its intent.

11. This Settlement Agreement supersedes all prior representations, negotiations, and understandings of the parties hereto, whether oral or written, and constitutes the entire agreement between the parties with respect to the matter hereof.

12. This Settlement Agreement shall not be effective, final and binding on the parties hereto unless this Settlement Agreement is approved in its entirety by the Board or the Commission and the proceeding terminated. If the Board or the Commission does not approve this Settlement Agreement in its entirety, then this Settlement Agreement shall not take effect and shall be deemed null and void. The parties agree that if the Board or the Commission does not approve this Settlement Agreement, they will negotiate in good faith to resolve any outstanding issues necessary to obtain its approval by the Board or the Commission.

13. In the event this Settlement Agreement becomes binding upon the parties in accordance with the terms herein, the Settlement Agreement shall be binding upon the parties' successors, assigns, representatives, employees, agents, partners, subsidiaries, and affiliates.

14. Yankee and CAN expressly waive the right to challenge, contest the validity of, or seek judicial review of any order entered as a result of this Settlement Agreement so long as such order is fully consistent with each provision of this Settlement Agreement.

15. When approved by the Board, the order entered as a result of this Settlement Agreement has the same force and effect as an order made after full hearing.

IN WITNESS WHEREOF CAN and Yankee have caused this Settlement Agreement to be executed by their duly authorized representatives on this 8th day of July 2005.

William A. Horin, Esq.
David A. Repka, Esq.
Amy C. Roma, Esq.
Counsel for Yankee Atomic Electric Company

Jonathan M. Block, Esq.
Counsel for Citizens Awareness Network

EXHIBIT 1 — ATTACHMENT A
Tritium in Ground Water from Off Site Monitoring Wells
Yankee Nuclear Power Station
Rowe, Massachusetts

Well No.	Aquifer Completion	Well Depth (feet)	Tritium (pCi/l)
CB-6	Shallow	25	
July-03			not detected
November-03			430
March-04			279
May-04			not detected
August-04			750
November-04			750
November-04			760
Sherman Spring (SP-1)	Spring	0	
August-03			not detected
November-03			not detected
March-04			210
May-04			890
September-04			not detected
November-04			323
MW-106A	Shallow	22	
November-04			620
MW-106B	Bedrock	261	
November-04			not detected
MW-106C	Intermediate	95	
November-04			not detected
MW-106D	Intermediate	154	
November-04			not detected
MW-108A	Shallow	25	
September-04			not detected
November-04			not detected
MW-108B	Bedrock	215	
September-04			not detected
November-04			not detected
November-04			not detected
MW-108C	Intermediate	65	
September-04			not detected
November-04			not detected

Note: EPA MCL for tritium is 20,000 pCi/l.

EXHIBIT 1 — ATTACHMENT B
Monitoring Well Location Map (Revision: 0, February 2005)
Yankee Nuclear Power Station
Rowe, Massachusetts

See: ADAMS Accession No. ML052010443

Please note that this reference is to the ADAMS copy attached to the settlement agreement as filed by the parties rather than the ADAMS copy of the Board's order with the attachment, which is of a lesser quality.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Dr. Paul B. Abramson, Chairman
Dr. Anthony J. Baratta
Dr. David L. Hetrick

In the Matter of **Docket No. 52-007-ESP**
(ASLBP No. 04-821-01-ESP)

EXELON GENERATION COMPANY, LLC
(Early Site Permit for Clinton
ESP Site) **July 28, 2005**

In this 10 C.F.R. Part 52 proceeding regarding the application of Exelon Generation Company, LLC (EGC or Applicant) for an early site permit (ESP), seeking approval of its site in DeWitt County, Illinois, for the possible construction of one or more new nuclear reactors in addition to those already licensed and operating thereon, the Licensing Board rules in favor of EGC in respect of its motion to dismiss the single admitted environmental contention regarding energy alternatives jointly proffered by Intervenors Environmental Law and Policy Center, Blue Ridge Environmental Defense League, Nuclear Information and Resource Service, Nuclear Energy Information Service, and Public Citizen (collectively, Intervenors), and in favor of LES and the NRC Staff in respect of Intervenors' motion to amend that contention in light of information made available since the filing of the original Environmental Report (ER) by the Applicant. There being no admitted contention remaining to be litigated in this proceeding, the contested portion of this proceeding is terminated.

NEPA: ENVIRONMENTAL ANALYSIS (HARD LOOK)

The Licensing Board's role vis-a-vis the National Environmental Policy Act (NEPA) is to ensure that the agency has taken the requisite ''hard look'' at the potential environmental effects of the proposed action and its reasonable alternatives, *see Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998), and ''to ensure that the agency has adequately considered and disclosed the environmental impact of its actions . . . .'' *Coalition on Sensible Transportation, Inc. v. Dole,* 826 F.2d 60, 66 (D.C. Cir. 1987) (citation omitted). Toward this end, the NRC Staff's environmental impact statement (EIS) must contain a thorough, reasoned discussion of the relevant environmental considerations. *See, e.g., Tongass Conservation Society v. Cheney,* 924 F.2d 1137, 1140 (D.C. Cir. 1991).

NEPA: AGENCY RESPONSIBILITIES; ENVIRONMENTAL ANALYSIS

NEPA and the NRC's 10 C.F.R. Part 51 regulations require the Staff to consider the potential environmental effects of any proposed ''major Federal action significantly affecting the quality of the human environment,'' as defined by NEPA. *See* 42 U.S.C. § 4332(2)(C).

NEPA: CEQ REGULATIONS

Additional guidance on implementing NEPA is available to federal agencies in regulations adopted by the Council on Environmental Quality (CEQ). *See* 40 C.F.R. Part 1500. These CEQ regulations are not, however, binding on the NRC because the Agency has not expressly adopted them; nevertheless, they have been considered and relevant concepts adopted by the NRC through its own Part 51 regulations.

NEPA: ENVIRONMENTAL REPORT

The NRC's Part 52, Subpart A regulations require an ESP applicant to file with its application an ER pursuant to the relevant portions of Part 51. *See* 10 C.F.R. § 52.17. This ER must contain ''a description of the proposed action, a statement of its purposes, and a description of the environment affected . . . .'' *Id.* § 51.45(b). Generally, an ER must also, among other things, discuss: (1) the impact of the proposed action on the environment, with impacts ''discussed in proportion to their significance,'' *id.* § 51.45(b)(1); and (2) alternatives to the proposed action, with that discussion being ''sufficiently complete to aid the Commission in developing and exploring, pursuant to section 102(2)(E)

of NEPA, 'appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources,' '' *id.* § 51.45(b)(3). The analysis in the ER must consider and balance ''the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects . . . includ[ing] consideration of the economic, technical, and other benefits and costs of the proposed action and of alternatives. . . .'' *Id.* § 51.45(c). Finally, with regard to uncertainties in data or assumptions, while the analysis ''shall, to the fullest extent practicable, quantify the various factors considered[, t]o the extent that there are . . . factors that cannot be quantified, those . . . factors shall be discussed in qualitative terms. . . .'' *Id.*

NEPA: ENVIRONMENTAL REPORT (EARLY SITE PERMIT APPLICATIONS)

Notwithstanding the general requirements for an ER, in the case of an application for an ESP the ER ''need not include an assessment of the benefits (for example, need for power) . . . .'' *Id.* § 52.17(a)(2).

NEPA: ENVIRONMENTAL IMPACT STATEMENT (RELIANCE ON ENVIRONMENTAL REPORT)

The Part 51 regulations require the Staff to review the ER and to prepare a draft environmental impact statement (DEIS) pursuant to the applicable provisions of that part. *Id.* § 52.18. While the Staff may rely on the ER in preparation of its EIS, it must also ''independently evaluate and be responsible for the reliability of all information used in the [DEIS].'' *Id.* § 51.70(b). As with the ER, generally a DEIS ''should also include consideration of the economic, technical, and other benefits and costs of the proposed action and alternatives and indicate what other interests and considerations of Federal policy, including factors not related to environmental quality if applicable, are relevant to the consideration of environmental effects of the proposed action . . . .'' *Id.* § 51.71(d).

NEPA: ENVIRONMENTAL IMPACT STATEMENT (RELIANCE ON ENVIRONMENTAL REPORT; EARLY SITE PERMIT APPLICATIONS)

In the particular case of an application for an early site permit, however, as with the ER, the EIS ''need not include an assessment of the benefits (for example, need for power) of the proposed action . . . .'' *Id.* § 52.18.

NEPA: ENVIRONMENTAL IMPACT STATEMENT (ALTERNATIVES)

NEPA requires that federal agencies take a ''hard look'' at the environmental impacts of a proposed major federal action, and at *reasonable* alternatives to that action. *See, e.g., Claiborne,* CLI-98-3, 47 NRC at 87-88. The inquiry is, however, more focused than this guidance might at first glance appear, as the Agency ''need only discuss those alternatives that are reasonable and 'will bring about the ends' of the proposed action.'' *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho NM 87174), CLI-01-4, 53 NRC 31, 55 (2001) (quoting *Citizens Against Burlington v. Busey,* 938 F.2d 190, 195 (D.C. Cir.), *cert. denied,* 502 U.S. 994 (1991).

NEPA: SCOPE OF ENVIRONMENTAL ANALYSIS (PREFERENCES OF PRIVATE APPLICANT)

Where ''a federal agency is not the sponsor of the project, 'the Federal government's consideration of alternatives may accord substantial weight to the preferences of the applicant . . . in the . . . design of the project.' '' *City of Grapevine v. Department of Transportation,* 17 F.3d 1502, 1506 (D.C. Cir. 1994) (quoting *Citizens Against Burlington,* 938 F.2d at 197-98). The Commission has determined that the Agency ''may take into account the economic goals of the project's sponsor,'' *HRI,* CLI-01-4, 53 NRC at 55 (quotation marks and citation omitted), and has further recognized that it ''should take into account the needs and goals of the parties involved in the application.'' *Id.* at 55-56 (citation omitted).

NEPA: ENVIRONMENTAL IMPACT STATEMENT

NEPA ''does not require that the agency select any particular options. It . . . 'simply prescribes the necessary process.' '' *HRI,* CLI-01-4, 53 NRC at 44 (citation omitted).

NEPA: ENVIRONMENTAL IMPACT STATEMENT (ALTERNATIVES)

An agency need not consider alternative ways to achieve a general goal; it should, instead, focus upon evaluating the alternative means by which a particular applicant reaches its goals. *See Citizens Against Burlington,* 938 F.2d at 199.

RULES OF PRACTICE: BURDEN OF PRODUCTION (NEPA ALTERNATIVES ISSUES)

In seeking to pose an admissible challenge to the ER or EIS discussion regarding alternatives, the burden is upon intervenors to propose reasonable alternatives by which the project's ends could be achieved. *Cf. Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.,* 435 U.S. 519, 553 (1978); *see also, e.g., Morongo Band of Mission Indians v. Federal Aviation Administration,* 161 F.3d 569, 576 (9th Cir. 1998) (implying that burden is on party challenging agency action to offer feasible alternatives); *Olmsted Citizens for a Better Community v. United States,* 793 F.2d 201, 209 (8th Cir. 1986) (same).

NEPA: ENVIRONMENTAL ANALYSIS (REASONABLE ALTERNATIVES)

Where an applicant has no business connection to the end users of its electricity and therefore no ability to implement demand side management (energy efficiency), demand side management is not a ''reasonable alternative'' and NEPA itself, therefore, does not require its examination.

RULES OF PRACTICE: NONTIMELY SUBMISSION OF CONTENTIONS

Under the Commission's 10 C.F.R. Part 2 rules of practice, requests for hearings or petitions to intervene and proposed contentions must be filed within a period of time specified in 10 C.F.R. § 2.309(b). A request that should have been filed within such a time period, but was not, constitutes a ''nontimely'' filing which, pursuant to 10 C.F.R. § 2.309(c), will not be considered by a licensing board absent a showing that, based upon a balancing of eight factors, the request should be entertained. In addition to the requirement that a contention be filed within a specified period of time (or be shown to satisfy the criteria for admissibility if it is ''nontimely''), a contention must satisfy the substantive admissibility criteria set out in 10 C.F.R. § 2.309(f)(1).

RULES OF PRACTICE: CONTENTIONS (NEW INFORMATION)

In addition to the general provisions for admissibility of nontimely contentions, 10 C.F.R. § 2.309(f)(2) provides the process for determining the admissibility of contentions based upon information that was not available at the time the ''petition was filed,'' and, impliedly, also deals with situations in which ''new'' information is added to the record. Section 2.309(f)(2) contains provisions for

addressing two substantively different situations. First, it addresses issues arising under NEPA, providing that ''[t]he petitioner may amend [previously admitted] contentions or file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement, environmental assessment, or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant's documents.'' 10 C.F.R. § 2.309(f)(2). Second, it focuses on contentions arising out of other new information, providing that ''[o]therwise, contentions may be amended or new contentions filed after the initial filing only with leave of the [Board] upon a showing that: (i) [t]he information upon which the amended or new contention is based was not previously available; (ii) [t]he information upon which the amended or new contention is based is materially different than information previously available; and (iii) [t]he amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.'' *Id.* § 2.309(f)(2)(i)-(iii).

RULES OF PRACTICE: CONTENTIONS (NEW INFORMATION)

The provisions of section 2.309(f)(2) prescribe the process for considering, among other things, the ''timing'' of submission of a contention; they do not eliminate the substantive requirements for the content of a new contention, or an amendment to an existing contention. Should the petitioner (or intervenor) make a sufficient showing as to the relevant portion of section 2.309(f)(2), the proffered new or amended contention still must meet the standard admissibility requirements of section 2.309(f)(1).

RULES OF PRACTICE: CONTENTIONS (NEW INFORMATION; GOOD CAUSE)

The first part of section 2.309(f)(2) appeared in 10 C.F.R. § 2.714(b)(2)(iii) under the Commission's old Part 2 rules of practice. In the context of that old rule, the Commission has stated that the phrase ''differ significantly'' neither adds to nor takes away from any of the admissibility requirements now found in section 2.309(c) and section 2.309(f)(1). Instead, ''information regarding the applicant's environmental report and the Staff's environmental review documents is relevant to the 'good-cause' factor'' found in section 2.309(c)(1), *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-93-12, 37 NRC 355, 362 (1993), which may be satisfied, generally, by a showing that (1) the information on which the contention is based is new so that the petitioner could not have presented it at an earlier time; and (2) the petitioner filed the contention promptly after learning of the new information. *See Texas Utilities Electric Co.*

(Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 69-73 (1992).

RULES OF PRACTICE: CONTENTIONS (NEW INFORMATION; GOOD CAUSE)

The second part of section 2.309(f)(2) is newly enacted and therefore has not been the subject of Commission interpretation. Nonetheless, the substance of this part of section 2.309(f)(2) bears a striking resemblance to the Commission's interpretation of the first part of that section. The two requirements for a good cause showing, ''new information'' and ''promptly filed,'' are analogous to the requirements of section 2.309(f)(2)(i) (information not previously available) and (f)(2)(iii) (submitted in a timely fashion).

RULES OF PRACTICE: CONTENTIONS (MATERIALITY)

Under the old Part 2 rules, the requirement that data or conclusions in the Staff's environmental review document ''differ significantly'' from data or conclusions in the applicant's ER appeared in 10 C.F.R. § 2.714(b)(2)(iii). Section 2.714(b)(2)(iii) also contained additional substantive requirements, including that the intervenor provide ''[s]ufficient information . . . to show that a genuine dispute exists with the applicant on a material issue of law or fact,'' which is incorporated under the new rules in section 2.309(f)(1)(vi). In addition, the Commission's new procedural rules contain a second ''materiality'' requirement in section 2.309(f)(1)(iv), stating that, for a contention to be admissible, it must be ''material to the findings the NRC must make to support the action that is involved in the proceeding.'' This latter requirement also appears to have its roots in the former section 2.714(b)(2)(iii). These correlations clearly advise that the requirement of section 2.309(f)(2) that data or conclusions ''differ significantly'' is inextricably intertwined with the requirements that the newly supplied information be material to the outcome of the proceeding. *See id.* § 2.309(f)(1)(iv), (vi). In other words, data or conclusions cannot be significantly different if they are not material to the determination the Staff must make under NEPA. And new information cannot be ''materially different'' than that found in the original ER if it does not raise a genuine dispute on a material issue of law or fact. Thus, there is a clear analogy between the requirement that data or conclusions ''differ significantly,'' as required by section 2.309(f)(2), and the requirement that information be ''materially different,'' as required by section 2.309(f)(2)(ii).

NEPA: ENVIRONMENTAL ANALYSIS (UNCERTAIN DATA)

A NEPA analysis often must rely upon imprecise and uncertain data, particularly when attempting to forecast future markets and technologies, and Boards (and parties) must appreciate the fact that such forecasts ''provide no absolute answers,'' and must be ''judged on their reasonableness.'' *See Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), LBP-96-25, 44 NRC 331, 355 (1996), *rev'd on other grounds,* CLI-97-15, 46 NRC 294 (1997).

NEPA: ENVIRONMENTAL ANALYSIS (RULE OF REASON)

NEPA analyses are subject to a ''rule of reason'' which teaches that an environmental impact statement need only discuss ''the significant aspects of the probable environmental impact of the proposed agency action.'' *Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 836 (1973).

NEPA: ENVIRONMENTAL ANALYSIS (CHALLENGES TO ECONOMIC ASSUMPTIONS)

In weighing the potential environmental harm of a proposed project against the ''benefits,'' we find compelling the test enunciated by the United States Court of Appeals for the Fifth Circuit in considering challenges to the accuracy of economic assumptions underlying the analysis of a federally owned project, which is ''whether the economic considerations . . . were so distorted as to impair fair consideration of those environmental consequences.'' *South Louisiana Environmental Council, Inc. v. Sand,* 629 F.2d 1005, 1011 (5th Cir. 1980). In the case of a privately sponsored project in which the agency's role is that of the grantor (or denier) of a federally issued license, alleged errors or discrepancies in underlying data should not be subjected to a more strict test than the ''not so distorted as to impair fair consideration'' test enunciated above for a federally owned project.

NEPA: ENVIRONMENTAL ANALYSIS (ECONOMIC COSTS)

Financial estimates related to the ''cost'' of power are not the same costs that are required to be analyzed under NEPA at this juncture. ''NEPA is generally regarded as calling for some sort of a weighing of the environmental costs against the economic, technical, or other public benefits of a proposal.'' *Claiborne,* CLI-98-3, 47 NRC at 88. The relative cost of nuclear power, which is unrelated to the environmental costs of the proposal, will only become ripe for challenge

when the economic benefits of the project are later addressed at the construction permit or combined license stage.

NEPA: FUEL CYCLE RULE

An applicant is permitted by 10 C.F.R. §§ 51.51 and 51.23, respectively, to rely upon Table S-3 to evaluate the effects of the uranium fuel cycle, and the Waste Confidence Rule for its findings regarding waste disposal.

RULES OF PRACTICE: SUMMARY DISPOSITION

Pursuant to the NRC's 10 C.F.R. Part 2 regulations governing procedure, a licensing board may grant summary disposition as to all or any part of a proceeding if the Board finds that ''the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.'' 10 C.F.R. § 2.710(d)(2). It is well established that summary disposition motions under the Commission's Part 2 rules are held to the same standards by which the federal courts evaluate Federal Rule of Civil Procedure 56 summary judgment motions. *See, e.g., Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102 (1993).

RULES OF PRACTICE: SUMMARY DISPOSITION (BURDEN OF PROOF)

The party seeking summary disposition bears the burden of showing that there is no genuine issue as to any material fact, *see Advanced Medical Systems,* CLI-93-22, 38 NRC at 102, and 10 C.F.R. § 2.710 requires that this be shown through a statement of material facts not at issue and any supporting materials, such as affidavits, discovery responses, and documents, accompanying the motion. Nevertheless, a party opposing the motion must put forth specific facts showing that there is a genuine issue of material fact to be litigated, *see* 10 C.F.R. § 2.710(b), and any material facts set forth in the movant's statement not controverted by a like statement of an opposing party are deemed admitted, *see id.* § 2.710(a).

RULES OF PRACTICE: SUMMARY DISPOSITION

The Board's function in considering summary disposition is only to decide whether genuine issues of material fact remain between the parties, not to substantively seek to resolve material factual issues that do exist. *See Sequoyah*

Fuels Corp. and General Atomics (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-17, 39 NRC 359, 361 (1994) (citing *Weiss v. Kay Jewelry Stores, Inc.,* 470 F.2d 1259, 1261-62 (D.C. Cir. 1972)). To support a finding that there is a genuine issue of material fact, the factual record, when considered in its entirety, must be in doubt to such a degree that it is necessary to hold a hearing to aid in resolving the factual dispute. *See, e.g., Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), LBP-83-46, 18 NRC 218, 223 (1983). In other words, summary disposition should not be used to decide genuine issues of material fact that warrant an evidentiary hearing, *see Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 509 (2001), but is appropriate if the moving party makes a properly supported showing as to the absence of any genuine issue of material fact and the opposing party fails to show that such an issue does exist.

RULES OF PRACTICE: SUMMARY DISPOSITION (MATERIALITY OF FACTUAL DISPUTE)

In the context of a motion for summary disposition, it is appropriate for the Board to look into the substance of the contention to the degree necessary to make the determination whether a genuine dispute about a factual issue exists, and whether, if one does, that dispute is indeed over a ''material'' fact. *Cf. Anderson v. Liberty Lobby,* 477 U.S. 242, 248 (1986).

RULES OF PRACTICE: CONTENTIONS (SCOPE)

A contention is interpreted and has meaning only to the extent of the ''bases,'' or specific flaws identified in intervenors' pleadings, which define its scope. *See, e.g., Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 (2002) (appropriate to refer to the bases provided in support of a contention to define the scope of that contention); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 (1988) (''[t]he reach of a contention necessarily hinges upon its terms coupled with its stated bases''), *aff'd sub nom. Massachusetts v. NRC,* 924 F.2d 311 (D.C. Cir. 1991), *cert. denied,* 502 U.S. 899 (1991).

MEMORANDUM AND ORDER
(Ruling on Motion for Summary Disposition Regarding Contention 3.1 and Petition for Admission of Amended Contention)

I. INTRODUCTION

On September 25, 2003, Exelon Generation Company, LLC (''EGC'' or ''Applicant'') submitted an application to the Nuclear Regulatory Commission (the ''Agency'') for a 10 C.F.R. Part 52 early site permit (''ESP''), seeking approval of its site in DeWitt County, Illinois (approximately 6 miles east of Clinton, Illinois, and commonly referred to as the ''Clinton Site'') for the possible construction of one or more new nuclear reactors in addition to those already licensed and operating thereon. This decision presents the Licensing Board's rulings in respect of: (1) Applicant's motion to dismiss the single admitted environmental contention regarding energy alternatives jointly proffered by Intervenors Environmental Law and Policy Center, Blue Ridge Environmental Defense League, Nuclear Information and Resource Service, Nuclear Energy Information Service, and Public Citizen (collectively, ''Intervenors''); and (2) Intervenors' motion to amend that contention in light of information made available since the filing of the original Environmental Report (''ER'') by the Applicant.

Contention 3.1, the Clean Energy Alternatives Contention, as admitted, states:

> The Environmental Review fails to rigorously explore and objectively evaluate all reasonable alternatives. In Section 9.2 of the Environmental Report, Exelon claims to satisfy 10 C.F.R. § 51.45(b)(3), which requires a discussion of alternatives that is ''sufficiently complete to aid the Commission in developing and exploring'' ''appropriate alternatives . . . concerning alternative uses of available resources,'' pursuant to the National Environmental Policy Act. However, Exelon's analysis is premised on several material legal and factual flaws that lead it to improperly reject the better, lower-cost, safer, and environmentally preferable wind power and solar power alternatives, and fails to address adequately a mix of these alternatives along with gas-fired generation and ''clean coal'' resource alternatives. Therefore, Exelon's ER does not provide the basis for the rigorous exploration and objective evaluation of all reasonable alternatives to the ESP that is required by NEPA.[1]

By letter dated September 23, 2004, the Applicant submitted additional information to the NRC Staff in response to Requests for Additional Information (''RAI''), copies of which were sent to the Intervenors.[2] That information, among

[1] LBP-04-17, 60 NRC 229, 252 (2004).

[2] *See* Exelon's Motion for Summary Disposition of Contention 3.1 (Mar. 17, 2005) at 2 n.3 [hereinafter Summary Disposition Motion].

other things, addressed alleged shortcomings in the ER by providing analyses of combinations of wind and solar generation with natural gas and/or clean coal-fired generation and by providing substantial new data, including responses incorporating material portions of the information Intervenors alleged in Contention 3.1 to be missing from the ER. Based in part on its RAI responses, on March 17, 2005, the Applicant moved for summary disposition of Contention 3.1, arguing, *first,* the original contention involved an asserted omission that has since been cured and therefore should now be dismissed as moot,[3] and, *second,* in light of the new analyses, and examination and weighing of updated information, there remains no genuine issue of material fact regarding wind and solar power and/or combinations thereof.[4]

In response, following a prehearing conference call[5] and several exchanges of motions, responses, and orders among the Board and the Parties,[6] on April 22, 2005, the Intervenors moved to amend the original contention to address the new or differing information now incorporated into the Applicant's documents and/or appearing in the Staff's Draft Environmental Impact Statement (''DEIS'') regarding the Clinton ESP.[7] These proposed amendments make three general assertions: *first,* notwithstanding this Board's original Order of August 6, 2004, rejecting an essentially identical challenge raised in Intervenors' initial petition to intervene,[8] Intervenors repeat their contention that the ER, and now the DEIS, are flawed because they improperly accept a project purpose of baseload[9] power production (thereby excluding, *ab initio,* consideration of energy efficiency alternatives); *second,* Intervenors contend that, because of the Applicant and/or

---

[3] *See id.* at 2, 13-15 (arguing contention moot because RAI response provides allegedly missing analyses, and incorporates and evaluates new and updated information, including that referred to by Intervenors).

[4] *See id.* at 2.

[5] *See* Tr. at 450-71 (Apr. 4, 2005 Conference Call).

[6] *See, e.g.,* Intervenors' Response to Exelon's Motion for Summary Disposition of Contention 3.1 (Apr. 6, 2005) [hereinafter Intervenors' Response to Summary Disposition Motion]; Licensing Board Memorandum and Order (Denying, Following Reconsideration, Filing Extension Request) (Mar. 30, 2005) (unpublished) [hereinafter March 30 Order]; Licensing Board Memorandum and Order (Denying Filing Extension Request) (Mar. 23, 2005) (unpublished) [hereinafter March 23 Order].

[7] *See* Intervenors' Motion To Amend Contention 3.1 (Apr. 22, 2005) [hereinafter Motion To Amend].

[8] *See* LBP-04-17, 60 NRC at 245-46.

[9] ''Baseload'' power plants are designed to operate continuously at a constant power level, as opposed to plants whose output is variable (either unintentionally because of variations in the energy source (e.g., solar, wind), or intentionally, where the equipment is capable, to follow the system load). Systemwide fluctuations in demand are satisfied by peaking plants, which can respond to variable demand, including those caused by variations in power supplied by wind, solar, and other power suppliers whose power output varies with the natural conditions.

Staff's use of erroneous and/or outdated data, the negative environmental effects of clean energy alternatives as well as those of combinations of wind, solar, and fossil are overestimated while those for nuclear are underestimated, leading to an incorrect weighing of the alternatives vis-a-vis the proposed nuclear reactor(s); and, *third,* Intervenors contend that, also because of the use of erroneous and/or outdated data, the cost of power generated by wind and solar is inaccurately overestimated while that for new nuclear is underestimated, leading to an incorrect weighing of the alternatives.[10]

Before the Board, therefore, are two closely related motions whose resolution we herein treat concurrently:

(a) the March 17, 2005 Motion for Summary Disposition of Contention 3.1 submitted by the Applicant, Exelon Generation Company, LLC; and

(b) the April 22, 2005 Motion To Amend Contention 3.1 submitted by Intervenors.

For the reasons set forth in detail below, we find: (1) Intervenors' proposed Amended Contention 3.1 is inadmissible (primarily because, as discussed in depth below, they were impermissible challenges to our regulations which had been previously considered and rejected by this Board, the facts offered in support of the proposed amendment either did not differ at all or differed insignificantly from those considered by the Applicant, and because Intervenors have shown no genuine issue of material fact or law in the amended contention); (2) no genuine issue of material fact remains regarding Contention 3.1 as admitted, and the contention is resolved in favor of the Applicant as moot; and (3) because no outstanding contention remains to be litigated in this proceeding, the contested portion of this proceeding is terminated.

---

[10] Regarding the examination of the ''mix'' of generation sources, EGC argues that the RAI response considers in detail these alternatives both separately and in a mix with gas-fired and coal resource alternatives. *See* Summary Disposition Motion at 13. EGC also continues to argue, however, that its goal is the generation of ''baseload'' power, and that the Board has ruled that it need only consider alternatives which can provide ''baseload.'' *See id.* at 9-10. To be sure, the Board said ''it is appropriate for *the Applicant* fully to consider its own business objectives and status as an independent power provider — as opposed to a public utility — as it analyzes alternatives.'' *See* LBP-04-17, 60 NRC at 246 (emphasis added). While these are EGC's stated goals and we have held that it is appropriate for EGC fully to consider its business objectives, independent of what is appropriate for the applicant, the NRC, as the agency taking the relevant ''federal action,'' must satisfy the National Environmental Policy Act requirements to look at reasonable alternatives; thus the content of the DEIS can appropriately be examined to assure, in the context of Contention 3.1 as amended by Intervenors, that it addresses reasonable combinations. These matters are examined in depth in the body of this decision.

II. BACKGROUND

Following the September 25, 2003 submission by EGC of its ESP application pursuant to Subpart A of Part 52 for an Early Site Permit for the possible construction of one or more new nuclear reactors at the Clinton Site, on December 8, 2003, the Commission issued a notice of hearing and opportunity to intervene in the EGC application, which was subsequently published in the *Federal Register.*[11] Under the Part 52 regulations, an application for an ESP allows the Applicant and the Staff (and other interested parties) to address certain key site-related environmental, safety, and emergency planning issues before the applicant has made the decision to build or selected the specific design of a potential facility on that site.[12] The Intervenors responded to the *Federal Register* notice, filing with the Commission a joint request for a hearing and petition to intervene in the proceeding on the ESP application,[13] which the Commission then referred to the Atomic Safety and Licensing Board Panel for consideration.[14] On March 8, 2004, the Panel's Chief Administrative Judge issued an initial prehearing order which, among other things, established a May 3, 2004 deadline for filing contentions in this proceeding and permitted Petitioners to supplement their initial petitions with additional standing-related information.[15] Thereafter, a Licensing Board (''Standing/Contentions Board'') was constituted to adjudicate preliminary matters, including contention admissibility, in this proceeding.[16]

On March 22, 2004, the Standing/Contentions Board issued a Memorandum and Order scheduling an Initial Prehearing Conference for June 21, 2004.[17] On May 3 and May 28, 2004, respectively, the Intervenors filed their con-

---

[11] 68 Fed. Reg. 69,426 (Dec. 12, 2003).

[12] *See* 10 C.F.R. Part 52, Subpart A.

[13] *See* Hearing Request and Petition To Intervene by [the Intervenors] (Jan. 12, 2004). During this same time period, two other companies, Dominion Nuclear North Anna, LLC (''North Anna'') and System Energy Resources, Inc. (''Grand Gulf''), also filed ESP applications. *See* LBP-04-17, 60 NRC at 235.

[14] *See Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), CLI-04-8, 59 NRC 113 (2004).

[15] *See* Licensing Board Panel Memorandum and Order (Initial Prehearing Order) (Mar. 8, 2004) at 2-3 (unpublished).

[16] *See* 69 Fed. Reg. 15,910 (Mar. 26, 2004). To ensure efficiency and uniformity among the three ESP proceedings, three Licensing Boards, each with the same membership, were established to consider jointly preliminary matters in the ESP proceedings. *See* LBP-04-17, 60 NRC at 235, 236 n.3. For simplicity's sake, we will hereafter refer to this first Board in the EGC ESP proceeding as the Standing/Contentions Board. All other references to the Licensing Board in this proceeding (e.g., the Board, this Board, we) refer to the Licensing Board as reconstituted on August 6, 2004. *See* 69 Fed. Reg. 49,916 (Aug. 12, 2004).

[17] *See* Licensing Board Memorandum and Order (Scheduling Initial Prehearing Conference) (Mar. 22, 2004) (unpublished).

tentions/supplemental petitions, and EGC and the Staff their responses.[18] On June 21-22, 2004, the Standing/Contentions Board held a 2-day prehearing conference at which the Intervenors, the Applicant, and the NRC Staff gave oral presentations regarding the standing of each of the Intervenors (then Petitioners) and the admissibility of proffered contentions.[19]

In an August 6, 2004 Memorandum and Order, the Standing/Contentions Board issued its ruling on standing and contention admissibility, finding that each of the Intervenors in the Clinton application had shown standing to intervene, but admitting only one of the several proffered contentions.[20] Specifically, the Standing/Contentions Board admitted a revised version of Environmental Contention (''EC'') 3.1 — The Clean Energy Alternatives Contention, finding that contention admissible only to the extent that it alleged: (a) a failure by the Applicant in its evaluation of energy resource alternatives in its power generation mix adequately to address a combination of wind, solar, natural gas-fired, and ''clean coal'' power generation; and (b) Applicant's use of potentially flawed and/or outdated information regarding wind and solar power generation methods.[21] This revision narrowed the scope of EC 3.1 (now referred to simply as Contention 3.1) to a considerable degree,[22] as discussed further below. That same day, following its rulings on standing and contention admissibility, the membership of the Board was reconstituted, forming the current Board in this proceeding.[23]

On August 23, 2004, the Intervenors filed with the Commission a petition for interlocutory review of the Standing/Contentions Board's rejection of that portion of Contention 3.1 pertaining to energy efficiency issues.[24] The Commission issued a ruling on November 10, 2004, denying Intervenors' petition for review, and expressing no view on the merits of the claim that the Standing/Contentions Board improperly excluded energy efficiency issues.[25]

In the interim, the NRC Staff issued to the Applicant RAI E9.2-1, asking that EGC provide information to address the admitted contention. The Applicant

---

[18] *See* LBP-04-17, 60 NRC at 236-37.

[19] *See id.* at 237-38.

[20] *See id.* at 238-40, 245-46.

[21] *See id.* at 246.

[22] *See id.* at 252; *supra* p. 144. Specifically, the Standing/Contentions Board rejected portions of the Intervenors' proffered Contention 3.1 pertaining to the ''need for power'' and ''demand side management,'' or energy conservation, as outside the scope of the proceeding and/or an impermissible challenge to Commission's regulations, *see* LBP-04-17, 60 NRC at 245, and found that the Applicant need not consider alternative energy generation methods not typically used by an independent power provider, as such an analysis would essentially equate to a ''need for power'' analysis. *See id.*

[23] *See* 69 Fed. Reg. 49,916.

[24] *See* Petition of [Intervenors] for Interlocutory Review of the Licensing Board Panel's Rejection of Energy Efficiency Alternatives Contention (Aug. 23, 2004).

[25] *See* CLI-04-31, 60 NRC 461 (2004).

responded to the RAI in a letter to the Staff dated September 23, 2004, providing an analysis of solar and wind power and combinations of wind and solar with coal and natural gas-fired facilities that, in combination, could generate baseload power equivalent to the proposed nuclear facility.[26] Following the circulation of the Applicant's response, on October 19, 2004, this Board held a prehearing conference call to discuss, among other things, the RAI response. During that call, the Staff advised the Board that it required time to review the response in order to determine whether to issue additional RAIs, and the Intervenors stated their position that, even taking into account the RAI response, the application was still deficient relative to the claims set out in Contention 3.1.[27]

On March 2, 2005, the Staff issued its Draft Environmental Impact Statement (''DEIS'') regarding the Applicant's ESP for the Clinton Site.[28] Chapter 8 of the DEIS contains an evaluation of the various alternative sources of power generation such as wind and solar, including combinations of alternatives that could generate baseload power equivalent to what would be generated by the Applicant's proposed ESP facility.[29] The Staff concluded, based in part on its review of the Applicant's ER and its RAI response, that wind and solar power, alone or in combination with other alternatives, are not reasonable alternatives to the proposed ESP facility.[30] In addition, the Staff concluded that a new nuclear unit at the Clinton Site is environmentally equivalent or preferable to a coal or natural gas-fired facility, or a reasonable combination of power generation alternatives.[31]

Following the Staff's issuance of its DEIS, on March 17, 2005, the Applicant filed a motion for summary disposition of Contention 3.1 and requested that, because no other contention has been admitted in this proceeding, the Intervenors be dismissed from the proceeding.[32] Specifically, the Applicant argues that: (1) Contention 3.1 is a contention asserting an omission and, by providing the information sought by the Intervenors in that contention, the Applicant has cured

---

[26] *See* Letter from S. Frantz, Counsel for EGC, to Licensing Board (Sept. 24, 2004), Encl. 2, at 4 [hereinafter RAI Response]. Though the Applicant provided the RAI responses to the Staff on September 23, those responses were not provided to the Board or parties (or, for that matter, added to the record in this proceeding) until September 24.

[27] *See* Tr. at 430-49; Licensing Board Memorandum and Order (Establishing Hearing Schedule) (Oct. 27, 2004) at 1 (unpublished).

[28] *See* NUREG-1815, ''Draft Environmental Impact Statement for an Early Site Permit (ESP) at the Exelon ESP Site'' (Feb. 2005) [hereinafter DEIS].

[29] *See id.,* ch. 8.

[30] *See id.* at 8-16 to 8-18.

[31] *See id.* at 8-21 to 8-22.

[32] *See* Summary Disposition Motion.

the alleged omission;[33] (2) even if Contention 3.1 is not a contention of omission subject to cure, there is no genuine issue of material fact regarding wind or solar power or combinations thereof, and the Board should therefore dispose of the contention; and (3) should the Board grant summary disposition of Contention 3.1, we should also dismiss the Intervenors from the proceeding on this application given that no further contested issues will remain between the parties.[34] On April 6, 2005, the Intervenors and the Staff each submitted responses to the Applicant's motion. For their part, the Intervenors assert that neither of the Applicant's grounds for dismissal is supported by the record, in that: (1) Contention 3.1 is not a contention of omission subject to cure, and, even if the contention is so construed, those omissions have not been cured; and (2) genuine disputes of material fact remain between the parties regarding the environmental impacts and economic costs of new nuclear power versus clean energy alternatives.[35] The Staff agreed with the Applicant to the extent that it avers that Contention 3.1 is a contention of omission which has been cured and is therefore moot, and that there is no genuine issue of material fact with respect to this contention.[36]

Thereafter, on April 22, 2005, the Intervenors filed a motion to amend Contention 3.1, alleging that: (1) the energy alternatives discussions by the Applicant and the Staff wrongly accept as a project purpose the creation of baseload power, thereby improperly excluding reasonable energy efficiency alternatives; (2) the Applicant and the Staff underestimate the environmental impacts of a new nuclear facility and overestimate the impacts of clean energy alternatives, thereby incorrectly concluding that those alternatives are not preferable to new nuclear power; (3) the Applicant, on whose filings the DEIS heavily relies, improperly concludes that new nuclear power would be less costly than clean energy alternatives; and (4) the Applicant and Staff fail to adequately analyze combinations of clean energy sources, providing only an analysis that unfairly favors nuclear power.[37]

On May 6, 2005, the Applicant and the Staff each responded to the Intervenors' motion. The Applicant contends that the Board should reject amended

---

[33] Following the Applicant's motion, but prior to receiving responses from the Intervenors and the Staff, we issued two orders, each of which repeated our earlier finding that Contention 3.1 is indeed a contention of omission subject to cure, and further stated that any challenge to the substance of information supplied by the Applicant in its RAI response or the Staff in its DEIS must take the form of a motion to amend Contention 3.1 or to file a new contention. *See* March 30 Order at 2-3; March 23 Order at 1-4.

[34] *See* Summary Disposition Motion at 1-3.

[35] *See* Intervenors' Response to Summary Disposition Motion at 1-2.

[36] *See* NRC Staff Answer to Exelon's Motion for Summary Disposition of Contention 3.1 (Apr. 6, 2005) at 1-2 [hereinafter Staff Response to Summary Disposition Motion]. The Staff, however, is silent on the issue of whether the Board should dismiss Intervenors from the proceeding on this Application.

[37] *See* Motion To Amend at 2-3.

Contention 3.1 in that Intervenors motion: (1) does not satisfy the late-filing criteria or the general contention admissibility standards set out, respectively, in 10 C.F.R. § 2.309(c) and (f); (2) raises issues previously rejected by this Board; (3) improperly challenges certain Commission rules and/or regulations; and (4) fails to demonstrate that a genuine dispute of a material issue of law or fact exists relative to issues raised in the amended contention.[38] For its part, the Staff submits that each issue in the amended contention fails in some way to satisfy the section 2.309(f) admissibility standards.[39] Finally, pursuant to a Board order,[40] on May 20, 2005, the Intervenors filed a reply in support of the motion to amend, asserting that, with regard to issues of environmental impacts, economic costs, and combinations of clean energy alternatives, the Applicant and the Staff have each failed to show that there is no genuine dispute of material fact.[41]

III. ANALYSIS OF INTERVENORS' MOTION TO AMEND CONTENTION 3.1

Before this Board are issues arising under the National Environmental Policy Act of 1969[42] (''NEPA''), including one of first impression[43] generally originating from the restructuring (deregulation) of the electric industry since the last time the Agency considered an application for construction of a new nuclear power plant. Our role here, vis-a-vis NEPA,[44] is to ensure that the agency has taken the requisite ''hard look'' at the potential environmental effects of the proposed action and its reasonable alternatives (within the general limitations and guidance discussed herein),[45] and ''to ensure that the agency has adequately considered and disclosed

---

[38] *See* Exelon's Answer to Intervenors' Motion To Amend Contention 3.1 (May 6, 2005) at 1-2 [hereinafter Applicant Response to Motion To Amend].

[39] *See* NRC Staff Answer to Intervenors' Motion To Amend Contention 3.1 (May 6, 2005) [hereinafter Staff Response to Motion To Amend].

[40] *See* Licensing Board Order (Schedule for Intervenors' Reply) (May 10, 2005) (unpublished).

[41] *See* Intervenors' Reply in Support of Motion To Amend Contention 3.1 (May 20, 2005) at 11.

[42] *See* 42 U.S.C. §§ 4321 *et seq.*

[43] Though the Standing/Contentions Board, in its August 6, 2004 ruling on contention admissibility, said that it is appropriate for an *Applicant* to consider, in its analysis of alternatives, its own business objectives (i.e., generation of baseload power), *see* LBP-04-17, 60 NRC at 245-46, that Board did not address the separate issue of what the *Staff* must appropriately examine in the context of its NEPA alternatives analysis. *See supra* note 10. This is the question we discuss at length in Part III.A, *infra,* of this ruling.

[44] As stated in the hearing notice for this proceeding, *see* 68 Fed. Reg. at 69,427, the Board also must conduct a ''mandatory hearing'' in this proceeding regarding matters that were not the subject of admitted contentions, including matters relative to the Agency's NEPA obligation.

[45] *See Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998).

the environmental impact of its actions . . . .''[46] Toward this end, the DEIS, and eventually the final environmental impact statement (''FEIS''), must contain a thorough, reasoned discussion of the relevant environmental considerations.[47]

The Applicant here is not the parent holding company whose subsidiaries are engaged in the whole panoply of electric industry functions; rather, it is a subsidiary that is an independent power producer (''IPP'') whose sole business is that of the generation of electricity and the sale of energy and capacity (and other associated sellable generation-related commodities) at wholesale.[48] Like other IPPs, and unlike the fully integrated electric utilities that were applicants for previous nuclear power plant construction permits, the Applicant has no transmission or distribution system of its own and no direct link to the ultimate consumer.[49]

In addition, the Applicant unequivocally asserts that it is dissimilar to many other IPPs in that its sole business purpose is the generation of *baseload* power.[50] Thus, while other IPPs might well include in their business purposes the ownership and operation of wind or solar or geothermal power plants, whose capability to generate energy varies with natural elements, EGC states its business purpose does not include generation technologies that cannot generate at full design capacity on a continuous basis. A significant issue in this proceeding, therefore, is the question of the extent to which the NEPA analysis should (or must) consider alternative power generation methodologies that cannot generate baseload power.

Intervenors' proffered Amended Contention 3.1 reads as follows:

> *Amended Contention 3.1: The Clean Energy Alternatives Contention*
>
> The Draft Environmental Impact Statement and Additional Filings by Exelon Fail To Rigorously Explore and Objectively Evaluate All Reasonable Alternatives. **Basis:** There are several serious shortcomings in the discussions of alternatives provided in the Draft EIS and Exelon filings. First, the discussions are flawed because they accept a project purpose — the creation of baseload power — that has not been evaluated and that improperly excludes reasonable energy efficiency alternatives. Second, the Draft EIS and Exelon filings overestimate the environmental impacts of clean energy alternatives and underestimate the impacts of new nuclear power to incorrectly conclude that clean energy alternatives are not environmental [*sic*] preferable to nuclear power. Third, the Exelon filings, which the Draft EIS

[46] *Coalition on Sensible Transportation, Inc. v. Dole,* 826 F.2d 60, 66 (D.C. Cir. 1987) (citation omitted).

[47] *See, e.g., Tongass Conservation Society v. Cheney,* 924 F.2d 1137, 1140 (D.C. Cir. 1991).

[48] *See, e.g.,* Environmental Report for the Exelon Generation Company, LLC, Early Site Permit (Sept. 25, 2003) at 9-2.1, ADAMS Accession No. ML032721602 [hereinafter ER].

[49] *See* DEIS at 8-2 to 8-3.

[50] *See, e.g.,* ER at 9.2-1; RAI Response at 14.

> heavily relies on, improperly conclude that new nuclear power would be less costly than clean energy alternatives. Fourth, the Draft EIS and Exelon filings fail to adequately analyze alternative clean energy sources in combination and instead provide an analysis that is unfairly biased in favor of nuclear power and overstates the impacts of combinations of alternatives. Each of these points demonstrates that this Amended Contention 3.1 is admissible because there continues to be ''a germane [*sic*] dispute . . . on a material issue of law or fact'' regarding the adequacy of the analysis of alternatives in this proceeding. 10 C.F.R. 2.309(f)(1)(vi).[51]

The challenges of the Intervenors can accordingly be divided into two fundamental categories: (1) those that challenge the narrowing of the scope of alternatives that must be examined; and (2) those that challenge particular data or assumptions employed by the Applicant in preparation of its ER and its responses to the Staff's RAIs and/or by the Staff in preparation of the DEIS.

The first set of challenges by the Intervenors is to the Applicant and Staff eliminating consideration of demand side management (''DSM''), or energy conservation, and to narrowing the scope of the NEPA alternatives analysis. The admissibility of these challenges hinges upon a determination of the appropriate scope of alternatives to be evaluated for an IPP whose sole business purpose is the ownership and operation of baseload power plants, and is considered in light of the body of law defining the necessary and appropriate scope of the alternatives examination.

The remaining challenges by the Intervenors reduce, at their core, to questions of the degree of precision required for, or the weight to be placed upon, analyses involving uncertain assumptions which affect certain specific elements of the environmental impacts of wind power and nuclear power, and of the relative financial costs (as opposed to environmental costs/impacts) of power generated by alternative sources when compared to the proposed new nuclear plant. Admissibility of these challenges is considered in light of the Commission precedents and regulations regarding contention admissibility, admissibility of a proposed amendment to an existing contention, and the required content of an ER or a DEIS. Many of these factors are comparative in nature, requiring evaluation of whether a factor raises a genuine issue regarding a material fact, or uses or relies upon data (or makes conclusions) that differ significantly from that previously presented by the Applicant. They cannot, therefore, be evaluated in a vacuum, and must be considered against the background of the underlying analyses presented by the Applicant and by the Staff.

---

[51] Motion To Amend at 2-3.

A. Challenges to Elimination of Demand Side Management and to Narrowing the Scope of Alternatives to Baseload Generation

1. NEPA and 10 C.F.R. Part 51 Regulations

The environmental contention at issue here arises under NEPA and the NRC regulations implementing the agency's responsibilities pursuant to that Act.[52] NEPA and the Agency's 10 C.F.R. Part 51 regulations require the Staff to consider the potential environmental effects of any proposed ''major Federal action significantly affecting the quality of the human environment,'' as defined by NEPA.[53] In this instance, the ''major Federal action'' that falls under the umbrella of NEPA is the determination by the NRC to issue, to deny, or to issue with conditions, the applied-for ESP. Additional guidance on implementing NEPA is available to federal agencies in regulations adopted by the Council on Environmental Quality (''CEQ'').[54] These CEQ regulations are not, however, binding on the NRC because the Agency has not expressly adopted them; nevertheless, they have been considered and relevant concepts adopted by the NRC through its own Part 51 regulations.[55]

The NRC's Part 52, Subpart A regulations require an ESP applicant to file with its application an Environmental Report pursuant to the relevant portions of Part 51.[56] This ER must contain ''a description of the proposed action, a statement of its purposes, and a description of the environment affected . . . .''[57] Generally, an ER must also, among other things, discuss: (1) the impact of the proposed action on the environment, with impacts ''discussed in proportion

---

[52] *See* 42 U.S.C. §§ 4321 *et seq.*; 10 C.F.R. Part 51.

[53] NEPA requires that

> all agencies of the Federal Government shall . . . include in every recommendation or report on . . . major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on (i) the environmental impact of the proposed action, (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented, (iii) alternatives to the proposed action, (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

See 42 U.S.C. § 4332(2)(C).

[54] *See* 40 C.F.R. Part 1500.

[55] The United States Court of Appeals for the Third Circuit has found, in this regard, that ''the CEQ guidelines are not binding on an agency that has not expressly adopted them. The NRC has acknowledged its obligation to comply with NEPA, however, by issuing regulations governing the consideration of the environmental impact of the licensing and regulatory actions of the agency.'' *Limerick Ecology Action, Inc. v. NRC,* 869 F.2d 719, 725 (3d Cir. 1989) (citations omitted).

[56] *See* 10 C.F.R. § 52.17.

[57] *Id.* § 51.45(b).

to their significance'';[58] and (2) alternatives to the proposed action, with that discussion being ''sufficiently complete to aid the Commission in developing and exploring, pursuant to section 102(2)(E) of NEPA, 'appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.' ''[59] The analysis in the ER must consider and balance ''the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects . . . includ[ing] consideration of the economic, technical, and other benefits and costs of the proposed action and of alternatives. . . .''[60] Notwithstanding this general guidance, for an ESP *the ER ''need not include an assessment of the benefits (for example, need for power)* . . . .''[61] Finally, with regard to uncertainties in data or assumptions, while the analysis ''shall, to the fullest extent practicable, quantify the various factors considered[, t]o the extent that there are . . . factors that cannot be quantified, those . . . factors shall be discussed in qualitative terms. . . .''[62]

In addition, the regulations require the Staff to review the ER and to prepare a draft environmental impact statement pursuant to the applicable provisions of Part 51.[63] While the Staff may rely on the ER in preparation of its EIS, it must also ''independently evaluate and be responsible for the reliability of all information used in the [DEIS].''[64] As with the ER, generally a DEIS

> should also include consideration of the economic, technical, and other benefits and costs of the proposed action and alternatives and indicate what other interests and considerations of Federal policy, including factors not related to environmental quality if applicable, are relevant to the consideration of environmental effects of the proposed action . . . .''[65]

In the particular case of an application for an early site permit, however, as with the ER, *the EIS ''need not include an assessment of the benefits (for example, need for power)* of the proposed action . . . .''[66]

---

[58] *Id.* § 51.45(b)(1).
[59] *Id.* § 51.45(b)(3).
[60] *Id.* § 51.45(c).
[61] *Id.* § 52.17(a)(2) (emphasis added).
[62] *Id.* § 51.45(c).
[63] *Id.* § 52.18.
[64] *Id.* § 51.70(b).
[65] *Id.* § 51.71(d).
[66] *Id.* § 52.18.

2. Board Ruling

As noted above, the Intervenors have presented challenges both to the Standing/Contentions Board's exclusion of demand side management (energy efficiency) alternatives and to the Applicant and Staff narrowing the scope of alternatives considered to those that can produce baseload power. We treat these issues in reverse order.[67]

a. Narrowing the Scope of Alternatives to Baseload Generation

Regarding narrowing the scope of alternatives to baseload generation technologies, Intervenors' first proposed amendment to the original contention alleges that it is improper for the DEIS to accept the project purpose as ''baseload power for sale on the wholesale market,'' and that ''reliance on such a purpose is arbitrary and capricious . . . .''[68] Because no authority is proffered for this proposition, we begin by noting NEPA's requirement that federal agencies, when considering the environmental impacts of their proposed actions in their decisionmaking process, must take a ''hard look'' at the environmental impacts of a proposed action, and at *reasonable* alternatives to that action.[69] The inquiry is, however, more focused than this guidance might at first glance appear, as the Agency ''need only discuss those alternatives that are reasonable and 'will bring about the ends' of the proposed action.''[70] Toward that end, where, as here, ''a federal agency is not the sponsor of the project, 'the Federal government's consideration of alternatives may accord substantial weight to the preferences of the applicant . . . in the . . . design of the project.' ''[71] The Commission has determined that the Agency ''*may* take into account the economic goals of the project's sponsor,''[72] and has further recognized that it ''*should* take into account the needs and goals of the parties

---

[67] As an initial matter, for the reasons discussed in Part III.B.1, *infra,* we need not address issues relative to the timeliness of these proffered challenges.

[68] Motion To Amend at 8-9 (citations omitted). It should be noted that the Applicant's project purpose is distinct from the NRC's purpose. The NRC's purpose is shaped by its function as a regulatory agency and, from its perspective, the purpose and need for the proposed action (issuance of the ESP) ''is to provide stability in the licensing process by addressing safety and environmental issues before plants are built, rather than after construction is completed.'' *See* DEIS at 1-6.

[69] *See, e.g., Claiborne,* CLI-98-3, 47 NRC at 87-88.

[70] *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho NM 87174), CLI-01-4, 53 NRC 31, 55 (2001) (quoting *Citizens Against Burlington v. Busey,* 938 F.2d 190, 195 (D.C. Cir.), *cert. denied,* 502 U.S. 994 (1991).

[71] *City of Grapevine v. Department of Transportation,* 17 F.3d 1502, 1506 (D.C. Cir. 1994) (quoting *Citizens Against Burlington,* 938 F.2d at 197-98).

[72] *HRI,* CLI-01-4, 53 NRC at 55 (emphasis added, quotation marks and citation omitted).

involved in the application.''[73] NEPA ''does not require that the agency select any particular options. It . . . 'simply prescribes the necessary process.' ''[74]

Furthermore, in urging that the NRC should look at energy conservation and a broader scope of other alternatives to the proposed nuclear facility, the Intervenors are, in essence, contending that the NEPA alternatives study should address the broad and general goal of satisfying the electricity needs toward which the proposed nuclear facility is directed. Intervenors are misguided in that belief: an agency need not consider alternative ways to achieve a *general goal* (such as, in the instant case, balancing the electricity supply and demand); it should, instead, focus upon evaluating the alternative means by which a *particular applicant reaches its goals.*[75]

Thus, in the instant case, NEPA and the decisions interpreting it advise us quite clearly that the Staff *should* take into account the Applicant's business purpose (goals and needs) of owning and operating baseload power plants at the Clinton Site. The Staff has indeed adopted that viewpoint, indicating that the proposal at issue is one of baseload power generation via nuclear power, to which there are a variety of alternatives, such as via fossil fuel or a combination of varying power sources, including solar or wind with a storage device or, as discussed above, in combination with a fossil-fired plant. Those alternatives, and only those alternatives, are addressed in the DEIS.[76] In the current context, ''reasonable'' alternatives may be limited to those that involve power generation (as opposed to demand side management efforts such as conservation), and to those technologies

---

[73] *Id.* at 55-56 (emphasis added, citation omitted).

[74] *Id.* at 44 (citation omitted).

[75] As stated by the United States Court of Appeals for the District of Columbia Circuit:

> In commanding agencies to discuss ''alternatives to the proposed action,'' however, NEPA plainly refers to alternatives to the ''major *Federal* actions significantly affecting the quality of the human environment,'' and not to alternatives to the applicant's proposal. An agency cannot redefine the goals of the proposal that arouses the call for action; it must evaluate the alternative ways of achieving *its* goals, shaped by the application at issue and by the function that the agency plays in the decisional process. Congress did expect agencies to consider an applicant's wants when the agency formulates the goals of its own proposed action. Congress did not expect agencies to determine for the applicant what the goals of the applicant's proposal should be.

Citizens Against Burlington, 938 F.2d at 199 (emphasis in original, citation omitted).

[76] *See* DEIS §§ 8.2.2, 8.2.3. The Staff takes the position that only alternatives that can generate baseload power must be considered, asserting that ''any feasible alternative to the proposed action would also need to generate baseload power.'' Staff Response to Motion To Amend at 10. In fact, the Staff argues persuasively that ''[t]he DEIS rejects clean energy alternatives [without storage devices] because they are not a viable, stand-alone alternative source of baseload power.'' *Id.* at 11. Therefore, the Staff argues, the environmental impacts of wind power, for example, by itself ''are immaterial because, based on the intermittent nature of the wind resource, wind power is not a suitable source of baseload capacity.'' *Id.* (citing DEIS at 8-17).

that can, singly or in combination, generate baseload power.[77] Moreover, in seeking to pose an admissible challenge to the ER or DEIS discussion regarding alternatives, the burden is upon the Intervenors to propose reasonable alternatives by which baseload power could be generated,[78] and in this case the only additional reasonable alternatives suggested by Intervenors and previously admitted to this proceeding are the combinations of wind and solar with fossil, all of which have now been examined.[79]

b. Demand Side Management

The Intervenors also repeat their challenge to the Standing/Contentions Board's earlier ruling that neither the Applicant nor the Staff need examine DSM as an alternative in the NEPA analysis, in that it allegedly ''constrains the alternatives in the analysis in violation of NEPA by improperly rejecting reasonable energy efficiency alternatives.''[80] This argument challenging elimination of DSM from the scope of alternatives to be examined has already been determined by the

[77] NEPA analysis may be restricted to alternatives that are ''reasonable,'' so long as the analysis does not reduce the set of alternatives to a null set. *See infra* note 84. The Intervenors cite *Simmons v. United States Army Corps of Engineers,* 120 F.3d 664, 669 (7th Cir. 1997), for the proposition that an agency need not rely on an applicant's definition of the project's purpose when defining reasonable alternatives. *See* Intervenors' Response to Summary Disposition Motion at 3; Motion To Amend at 8. The Commission, however, adopting the approach of the District of Columbia Circuit, has directed consideration of an applicant's definition of a project purpose when formulating NEPA alternatives. *HRI,* CLI-01-4, 53 NRC at 55 (holding that when a project is sponsored by a private applicant, the federal agency may ''accord substantial weight to the preferences of the applicant'' and ''take into account the 'economic goals of the project's sponsor' '') (citing *Citizens Against Burlington,* 938 F.2d at 197; *City of Grapevine,* 17 F.3d at 1506). We do not view these two approaches as incompatible here, given the facts that: (a) there are several alternative ways to generate baseload power which have been examined by the Applicant; (b) the Staff has examined a multitude of alternatives, including some that cannot generate baseload power; and (c) Intervenors have failed to show that any of their proposed alternatives are even arguably competitive baseload alternatives.

[78] *Cf. Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.,* 435 U.S. 519, 553 (1978); *see also, e.g., Morongo Band of Mission Indians v. Federal Aviation Administration,* 161 F.3d 569, 576 (9th Cir. 1998) (implying that the burden is on the party challenging agency action to offer feasible alternatives); *Olmsted Citizens for a Better Community v. United States,* 793 F.2d 201, 209 (8th Cir. 1986) (same).

[79] Accordingly, any challenge by the Intervenors alleging that the Staff must analyze alternatives other than those with the capability to produce baseload power is inadmissible as outside the scope of this proceeding. *See infra* Part III.B.1; *see also* LBP-04-17, 60 NRC at 241.

[80] Motion To Amend at 9.

Standing/Contentions Board as it relates to the ER,[81] with the Commission declining to consider Intervenors' petition for interlocutory review of that determination.[82]

Two fundamental factors caused this challenge to fail when it was first raised by the Intervenors, and hold true for our instant analysis: *first,* demand side management, no matter how it is characterized, remains an alternative to generation of power, and examination of such an option is nothing more than a surrogate for examination of the ''need'' for power which is expressly not required pursuant to sections 52.17(a)(2) and 52.18;[83] and, *second,* in the current context, because the Applicant has no business connection to the end users of its electricity and therefore no ability to implement DSM, DSM is not a ''reasonable alternative'' and NEPA itself, therefore, does not require its examination.[84]

Intervenors present no argument, and nothing else presented to us suggests, that the additional information submitted by the Applicant since its original ER or the content of the DEIS should, in any manner whatsoever, alter this conclusion.[85] Therefore, we repeat and confirm the earlier holding by the Standing/Contentions

---

[81] *See* LBP-04-17, 60 NRC at 245-46.

[82] *See* CLI-04-31, 60 NRC 461. In declining the Intervenors' petition for interlocutory review of the Standing/Contentions Board's determination, the Commission expressed no view on the merits of the Intervenors' claim.

[83] In this vein, any challenge by the Intervenors alleging a failure of the Applicant or Staff to consider DSM as an alternative constitutes an impermissible challenge to Commission regulations and is therefore inadmissible. *See infra* Part III.B.1; *see also* LBP-04-17, 60 NRC at 241.

[84] The mere elimination of this one alternative does not so narrow the scope of alternatives being examined as to run afoul of the line of cases standing for the proposition that the scope of alternatives cannot be so narrowed as to result in no alternative but the proposed action. *See Citizens Against Burlington,* 938 F.2d at 196 (''an agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency's power would accomplish the goals of the agency's action, and the EIS would become a foreordained formality''); *City of New York v. Department of Transportation,* 715 F.2d 732, 743 (2d Cir. 1983) (''an agency will not be permitted to narrow the objective of its action artificially and thereby circumvent the requirement that relevant alternatives be considered'').

[85] Specifically, the project's purpose is set forth in the EGC filings and DEIS as the production of ''baseload power for sale on the wholesale market,'' and neither the information contained in the responses to RAIs nor that contained in the DEIS in this regard use data or reach conclusions that are ''materially different'' or ''differ significantly'' from what is stated in the Applicant's ER. Section 9.2.2 of the ER states that the ''ESP application is premised on the installation of a facility that would primarily serve as a large base-load generator and that any feasible alternative would also need to be able to generate base-load power,'' and section 1.1 of the Administrative Information portion of EGC's ESP Application states that the purpose of the Application is ''to set aside the proposed site for future energy generation and sale on the wholesale energy market.'' In this regard, we note that neither the DEIS nor the subsequent EGC filings present new information — they merely repeat information set out clearly in the ESP Application, including the ER, which was filed in September 2003.

Board that demand side management need not be considered. This is the case for the ER, the DEIS, and the Staff's forthcoming FEIS.

For the foregoing reasons, we find: (a) no merit in the Intervenors' argument that it is improper for the Agency to consider the business goals of the Applicant in establishing the scope of alternatives the Agency will examine; and (b) that elimination of DSM and of generation methodologies that cannot generate baseload power was fully appropriate in the instant circumstances. Those portions of Intervenors' proposed amendment are therefore inadmissible.

B. Challenges to Allegedly Erroneous and/or Outdated Data

1. Legal Standards for Contention Admissibility

Under the Commission's 10 C.F.R. Part 2 rules of practice, requests for hearings or petitions to intervene and proposed contentions must be filed within a period of time specified in 10 C.F.R. § 2.309(b). A request that should have been filed within such a time period, but was not, constitutes a ''nontimely'' filing which, pursuant to 10 C.F.R. § 2.309(c), will not be considered by a Licensing Board absent a showing that, based upon a balancing of eight factors, the request should be entertained. In addition to the requirement that a contention be filed within a specified period of time (or be shown to satisfy the criteria for admissibility if it is ''nontimely''), a contention must satisfy the substantive admissibility criteria set out in 10 C.F.R. § 2.309(f)(1).

In addition to these general provisions, 10 C.F.R. § 2.309(f)(2) provides the process for determining the admissibility of contentions based upon information that was *not* available at the time the ''petition was filed,'' and, impliedly, also deals with situations in which ''new'' information is added to the record. Section 2.309(f)(2) contains provisions for addressing two substantively different situations: *first,* it addresses issues arising under NEPA, providing that ''[t]he petitioner may amend [previously admitted] contentions or file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement, environmental assessment, or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant's documents'' (i.e., contentions based upon the content of the Staff's NEPA review document(s)); and, *second,* it focuses on contentions arising out of other new information, providing that:

> Otherwise, contentions may be amended or new contentions filed after the initial filing *only with leave of the [Board]* upon a showing that —
>
> (i) The information upon which the amended or new contention is based was not previously available;
>
> (ii) The information upon which the amended or new contention is based is materially different than information previously available; and

(iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.[86]

The provisions of section 2.309(f)(2) prescribe the process for considering, among other things, the ''timing'' of submission of a contention; they do not eliminate the substantive requirements for the content of a new contention, or an amendment to an existing contention. Should the petitioner (or, as here, intervenor) make a sufficient showing as to the relevant portion of section 2.309(f)(2), the proffered new or amended contention still must meet the standard admissibility requirements of section 2.309(f)(1). Because the Standing/Contentions Board discussed the section 2.309(f)(1) general standards for contention admissibility in a previous decision in this case, we will not repeat that discussion in depth here.[87] We note, however, that subsections 2.309(f)(1)(iv) and (vi) are particularly pertinent to the issues currently before us, the former requiring the Intervenors to demonstrate that the issue(s) raised in the contention is (are) *material to the findings the NRC must make* to support the applied-for ESP, and the latter requiring the Intervenors to show that *a genuine dispute as to a material issue of law or fact* exists between them and the Applicant sufficient to warrant further inquiry.

As an initial matter, prior to the Intervenors' filing of the motion to amend, the Board made two rulings regarding procedural matters relating to the filing of that motion. First, in a March 30, 2005 memorandum and order, we found that, based on prior agreement of the Parties, it was appropriate that new information provided by the Applicant in its RAI response need not be addressed (including by the Intervenors via a motion to admit a new or amended contention, should they so desire) until after issuance of an EIS.[88] In other words, *we found it appropriate* following the issuance of the Staff's DEIS that the Parties ''address all additional information provided since release of the ER,'' including that supplied in the RAI response, and *that any timeliness determinations would therefore be based upon the date the DEIS was issued.*[89] Second, in a subsequent conference call, as memorialized in an April 6, 2005 memorandum, *we ruled* (upon a request by Intervenors) that *a filing regarding a new or amended contention relative to the*

[86] 10 C.F.R. § 2.309(f)(2)(i)-(iii) (emphasis added).

[87] *See* LBP-04-17, 60 NRC at 240-43.

[88] *See* March 30 Order at 3-4.

[89] *See id.* at 5. Therefore when addressing, *infra,* the questions of whether data or conclusions in the DEIS ''differ significantly,'' or new information is ''materially different,'' the new information/data/conclusions will be compared with that found in the Applicant's *original* ER, i.e., prior to submitting any RAI responses or other additional information.

DEIS and/or new information provided by the Applicant would not be untimely if filed within 45 days of issuance of the DEIS, i.e., on or before April 22, 2005.[90]

In the instant case, the Intervenors filed an amended contention that raises issues regarding *both* parts of section 2.309(f)(2) discussed above: as it relates to the Staff's DEIS, the contention falls under the first part of this section, and as it relates to the Applicant's RAI response, the contention falls under the second part. The first part of section 2.309(f)(2) is not a new regulation; in fact, under the Commission's old Part 2 rules of practice, it appeared as 10 C.F.R. § 2.714(b)(2)(iii).[91] The Commission has stated, on more than one occasion, that the phrase ''differ significantly'' neither adds to nor takes away from any of the admissibility requirements in either section 2.309(c)[92] or section 2.309(f)(1).[93] Instead, ''information regarding the applicant's environmental report and the Staff's environmental review documents is relevant to the 'good-cause' factor'' found in section 2.309(c)(1)[94] which may be satisfied, generally, by a showing that (1) the information on which the contention is based is new so that the petitioner could not have presented it at an earlier time; and (2) the petitioner filed the contention promptly after learning of the new information.[95]

The second part of section 2.309(f)(2) is, however, newly enacted and therefore has not been the subject of prior Commission interpretation. Nonetheless, the substance of this part of section 2.309(f)(2) bears a striking resemblance to the Commission's interpretation of the first part of that section. In the Board's

---

[90] *See* Tr. at 460; Licensing Board Memorandum (Clarifying March 30 Memorandum and Order; Memorializing April 4 Conference Call) (Apr. 6, 2005) at 3 (unpublished). Though the Staff issued its DEIS on March 2, 2005, it was not circulated to the Intervenors until March 8, 2005; we therefore held the 45-day clock began on March 8. *See* Tr. at 456.

[91] The Part 2 rules of practice were revised on January 14, 2004, *see* 69 Fed. Reg. 2182, and the new rules apply to all proceedings noticed on or after February 13, 2004. Although the instant proceeding was noticed prior to the effectiveness date of the new Part 2, the Commission found that applying the new rules would not result in any unwarranted delay, added burden, or unfairness, and thus determined that the new Part 2 rules would apply to this proceeding. *See* CLI-04-8, 59 NRC at 118-19.

[92] Formerly found, in relevant part, as 10 C.F.R. § 2.714(a)(1).

[93] Formerly found, in relevant part, as 10 C.F.R. § 2.714(b). In this regard, the Commission expressly has held that, in promulgating the change that adopted the ''differ significantly'' requirement for the predecessor to section 2.309(f)(2), it was neither establishing an additional criterion for, nor eliminating any of the criteria set out in, the provisions of 2.714(a) [now, in relevant part, section 2.309(c)]; rather, it held that ''a showing that the Staff's environmental review documents significantly differ from the applicant's environmental report, although ordinarily sufficient to show good cause for lateness, is not by itself sufficient to make an environmental contention admissible, because the petitioner must still meet the other criteria in section 2.714(a).'' *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-93-12, 37 NRC 355, 362, 363 (1993).

[94] *See id.* at 362.

[95] *See Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 69-73 (1992).

view, the two requirements for a good cause showing, ''new information'' and ''promptly filed,'' are analogous to the requirements of sections 2.309(f)(2)(i) (information not previously available) and (f)(2)(iii) (submitted in a timely fashion).[96]

This leaves for interpretation what is intended by section 2.309(f)(2)(ii) (based on ''materially different'' information) and how that requirement relates to the section 2.309(f)(2) requirement that data or conclusions in the Staff's environmental review document ''differ significantly'' from data or conclusions in the applicant's ER. As noted above, under the old Part 2 rules, the ''differ significantly'' requirement appeared in 10 C.F.R. § 2.714(b)(2)(iii). Section 2.714(b)(2)(iii) also contained additional substantive requirements, including that the intervenor provide ''[s]ufficient information . . . to show that a genuine dispute exists with the applicant on a material issue of law or fact,'' which is incorporated under the new rules in section 2.309(f)(1)(vi).[97] In addition, our new rules contain a second ''materiality'' requirement in section 2.309(f)(1)(iv), stating that, for a contention to be admissible, it must be ''material to the findings the NRC must make to support the action that is involved in the proceeding.'' This latter requirement also appears to have its roots in the former section 2.714(b)(2)(iii). In the Board's judgment, therefore, these correlations clearly advise that the requirement of section 2.309(f)(2) that data or conclusions ''differ significantly'' is inextricably intertwined with the requirements that the newly supplied information be material to the outcome of the proceeding.[98] In other words, data or conclusions cannot be significantly different if they are not material to the determination the Staff must make under NEPA. And new information, found here in the RAI response, cannot be ''materially different'' than that found in the original ER if it does not raise a genuine dispute on a material issue of law or fact. Thus, there is a clear analogy between the requirement that data or conclusions ''differ significantly,'' as required by section 2.309(f)(2), and the requirement that information be ''materially different,'' as required by section 2.309(f)(2)(ii).

Because of these analogies between the first and second parts of section 2.309(f)(2), the Board analyzes Intervenors' challenges with regard to the DEIS and to the RAI response in the same manner. First, because Intervenors filed the motion to amend within that 45-day ''safe harbor'' established by the Board in our April 6 Order, we need not address any issues of timeliness (or untimeliness),

---

[96] In fact, in the Commission's only substantive ruling related to section 2.309(f)(2)(i)-(iii), in citing those subsections, the Commission also provided a citation to the ''good cause'' prong of the late-filing standards found in section 2.309(c)(1). *See Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 636 n.5 (2004).

[97] *Compare* 10 C.F.R. § 2.714(b)(2)(iii) (repealed 2004) *with* 10 C.F.R. § 2.309(f)(1)(vi).

[98] *See id.* § 2.309(f)(1)(iv), (vi).

either in the context of ''good cause'' or section 2.309(f)(2)(iii). Second, because we have held that the baseline for judgment of the newness of information is the original ER, and the proffered amended contention is based on information supplied since then, we find that these contentions are based upon ''new information'' that was ''not previously available.''[99]

This leaves for the Board the question of materiality: whether the Intervenors' challenges, presented in the form of an amended contention, pose matters material to the outcome of this proceeding. And, of course, in addition to such a determination is the requirement that each portion of the amended contention must meet the other general section 2.309(f)(1) requirements for contention admissibility. Accordingly, an assessment of the Intervenors' challenges to allegedly erroneous and/or outdated data relative to the issue of materiality and those other requirements set forth in section 2.309(f)(1) follows.

2. Board Ruling

Issues raised by challenges to the data can only be understood in the context of the underlying analyses presented by the Applicant in its ER and responses to RAIs and by the Staff in the DEIS. We examine those analyses below.

In its ER, the Applicant analyzed the environmental impacts of the proposed 2180 megawatt (''MW'') nuclear facility, whose specific design has not yet been selected, but whose overall characteristics are within certain parameters defined in the ER. The Applicant then examined a set of alternative ways to generate the desired 2180 MW, including: wind power coupled with energy storage mechanisms (the Applicant concluded that energy storage mechanisms are too expensive to make the combination a practical baseload generation alternative);[100] solar power also coupled with energy storage mechanisms (also determined by the Applicant to be too expensive to be a practicable alternative);[101] fuel cells (technology insufficiently matured);[102] geothermal power (unavailable in Illinois);[103] hydropower (no suitable sites in Illinois);[104] burning wood waste or other biomass

[99] The information challenged was not available at the time Intervenors filed their original intervention petition and contentions; indeed, the fact that the information later provided by the Applicant in the RAI response was lacking in the original application forms the basis for Contention 3.1 as admitted, and, given that the DEIS was issued approximately 9 months following the Intervenors' petition, this information is also ''new'' as compared to the ER.

[100] ER at 9.2-7.

[101] *Id.* at 9.2-8.

[102] *Id.* at 9.2-10 to 9.2-11.

[103] *Id.* at 9.2-8.

[104] *Id.*

(insufficient ''fuel'' supplies in Illinois);[105] burning municipal solid waste (high capital costs and lack of environmental advantages when compared to coal fired plants);[106] burning ''energy crops'' (high capital costs and lack of environmental advantages);[107] oil-fired (high fuel costs and lack of environmental advantages as compared to coal);[108] coal-fired (deemed a competitive alternative);[109] and natural gas-fired (deemed a competitive alternative).[110]

In response to the admission of Contention 3.1 and RAIs from the Staff, the Applicant revised its analysis of wind and solar energy, including the impacts comparison, and its analysis of alternatives, to which it added an analysis of combinations of either a clean coal or natural gas-fired plant to a wind and solar combination.[111] It is of particular import to note that, in analyzing this last alternative, the Applicant had, as a premise, that the combined plant must be able to generate 2180 MW at all times.[112] This led to the inevitable conclusion that the fossil-fired portion of the combination must have the full 2180 MW capacity, because there are undoubtedly times at night (no solar power production) when the wind will not be blowing.[113] In assessing the environmental impacts of this combination, the Applicant noted that it had already determined that the environmental impacts from a natural gas-fired plant are less than those of a clean coal-fired plant.[114] It then noted that a natural gas-fired plant would be better able to provide the varying power needs to fill shortfalls in power from wind and solar, and therefore concluded that the better combination would be natural gas with wind and solar.[115] Therefore, for the purpose of computing environmental impact, it considered the natural gas-fired combination. However, because coal has been estimated to produce lower-cost power than natural gas, for its economic comparison, EGC considered a combination with a coal-fired

[105] *Id.* at 9.2-9.

[106] *Id.* at 9.2-9 to 9.2-10.

[107] *Id.* at 9.2-10.

[108] *Id.*

[109] *Id.* at 9.2-11.

[110] *Id.* at 9.2-11 to 9.2-12.

[111] *See* RAI Response.

[112] *See id.* at 14.

[113] *See id.* at 15. Wind resources are generally characterized by wind power density classes, meaning that at a height of 50 meters (approximately 164 feet) each class produces a particular average windspeed ranging from Class 1 (less than 12.5 miles per hour (mph)) to Class 7 (greater than 19.7 mph). *See* Summary Disposition Motion at 18. Class 4 wind sites (15.7-16.8 mph), the highest class found in Illinois, are regarded as potentially economical as a source of energy production, and Class 3+ sites may, with advances in technology and financial support, also be economical. *See id.*

[114] RAI Response at 15.

[115] *Id.*

plant.[116] This split evaluation, while clearly an inaccurate representation of any particular combination, puts an alternative combined facility in the best possible light by minimizing both environmental impacts and costs of power production. Even with this ''spin,'' the Applicant concluded that the combined plant would have environmental impacts that are equal to or greater than the proposed nuclear facility,[117] and that the cost of power produced by the combined plant would not be competitive with the proposed nuclear facility.[118]

In section 8.2.2 of the DEIS, the Staff presented analyses of coal-fired and natural gas-fired generation. Stating that it reviewed the Applicant's analyses and conducted its own evaluation, the Staff also presented brief discussions and conclusions regarding wind, geothermal, hydro, solar, wood waste, municipal solid waste, other biomass-derived fuels, fuel cells, and oil-fired generation.[119] In addition, the Staff examined, as one of many possible combinations of alternatives, a combination of three 550 megawatts electric (''MW(e)'') natural gas-fired turbines with 60 MW(e) of wind, hydropower, or pumped storage, 90 MW(e) from biomass, and 400 MW(e) of purchased power, conservation, and DSM.[120] The Staff concluded that the environmental impacts of the proposed new nuclear facility were either equivalent to, or preferable to, the reasonable alternatives, which it found to be natural gas-fired, coal-fired, or the combination mentioned above.[121]

It is against this background that we consider the admission (or rejection) of the portions of Contention 3.1 and of Intervenors' proposed amendments thereto that focus on specific alleged errors in data or assumptions. These portions of the challenges raised by Intervenors are, in essence, a number of specifically alleged errors in assumptions and/or data used in the Applicant's and/or the Staff's analyses of the environmental impacts of the proposed nuclear facility or in alternatives thereto, or in analysis of the relative cost of power produced thereby.

As we discussed above, for an amendment to a contention based upon such challenges to be admissible, those alleged errors must be in data or assumptions that are significantly different from those challenged in the original ER, meaning that the alleged differences would lead to definitively and materially different results, either in the assessment of the environmental impact of a particular generation option or of the ''benefits'' which such an option creates. And, as we

---

[116] *Id.*

[117] *Id.* at 17.

[118] *Id.* at 17-18.

[119] *See* DEIS at 8-15 to 8-21.

[120] *See id.* at 8-21 to 8-22.

[121] *See id.* at 8-22; Table 8-4.

earlier noted,[122] with respect to certain challenges to cost-related analyses used in the ''benefits'' side of the balance, the NRC's regulations expressly provide that, in an ESP case, both the ER and the DEIS ''need not include an assessment of the benefits . . . of the proposed action'';[123] i.e., Agency regulations expressly permit exclusion of analysis of benefits.[124] Therefore, there may be no legal foundation for a challenge to an alleged error in that cost-related analysis.

With the foregoing as background for our analysis, we begin by noting that Intervenors' specific challenges fall into two general classes which, because of the portion of the balancing analysis they address, are examined differently: (1) those that challenge an assumption or data that was employed by the Applicant or the Staff in making the environmental impact analysis; and (2) those that challenge a financial aspect of the cost analyses, which is clearly not part of the environmental impact portion of the analysis, but, because one methodology could be found preferable over another because of its lower cost, falls on the ''benefits'' side of the balance.

In examining these specific challenges, we are cognizant of the fact that a NEPA analysis often must rely upon imprecise and uncertain data, particularly when attempting to forecast future markets and technologies, and Boards (and parties) must appreciate the fact that such forecasts ''provide no absolute answers,'' and must be ''judged on their reasonableness.''[125] NEPA analyses are subject to a ''rule of reason'' which teaches that an environmental impact statement need only discuss ''the *significant* aspects of the *probable* environmental impact of the proposed agency action.''[126] In weighing the potential environmental harm of a proposed project against the ''benefits,'' we find compelling the test enunciated by the United States Court of Appeals for the Fifth Circuit in considering challenges to the accuracy of economic assumptions underlying the analysis of a *federally owned project,* which is ''whether the economic considerations

---

[122] *See supra* p. 155.

[123] *See* 10 C.F.R. §§ 52.17(a)(2) and 52.18.

[124] This point is made clear by the provisions of section 52.18 that expressly require an analysis of the environmental effects of a nuclear facility whose characteristics are within the postulated site parameters, but expressly exclude the benefits analysis. We note, however, that this is an exclusion that is unique to applications for ESPs, and, further, should the ESP be issued for this site, a consideration of the benefits ''will be considered in the EIS for any construction permit (CP) or combined license (COL) application that references such an ESP.'' DEIS at 8-1. Therefore, the fact that challenges relative to an analysis of benefits are, at this stage, inadmissible would not preclude challenges to the benefits analysis in the context of any future application for a construction permit or combined license at the Clinton ESP site.

[125] *See Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), LBP-96-25, 44 NRC 331, 355 (1996), *rev'd on other grounds,* CLI-97-15, 46 NRC 294 (1997).

[126] *Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 836 (1973) (emphasis in original).

. . . were *so distorted as to impair fair consideration of those environmental consequences.*''[127] In the instant case of a *privately sponsored project*[128] in which the agency's role is that of the grantor (or denier) of a federally issued license, alleged errors or discrepancies in underlying data should not be subjected to a more strict test than the ''not so distorted as to impair fair consideration'' test enunciated above for a federally owned project. We thus would adopt this benchmark for both the examination of economic effects and for application to uncertainties in the environmental impact analyses in our analysis of admissibility of an intervenor's proposed contentions.

Additionally, we note that challenges in this instance by Intervenors to the financial elements of the Applicant and Staff analyses relate to the ''benefit'' side of the balancing of the project's environmental impacts against its benefits, an aspect of the analysis that, because NEPA is an *environmental* protection measure, is not of the same significance as the NEPA-mandated balancing of environmental impacts of the proposed new nuclear power plant against those of the reasonable alternatives.[129] Thus, even if Agency regulations required a benefits analysis to be included in the ER or an EIS (which they expressly do not), in this context, in which the challenge is to financial estimates underlying the estimated cost of power expected to be produced by the proposed new nuclear facility or by one or more of the alternatives to that facility, the weight assigned in the balancing analyses should be further reduced. Thus, disputes about the financial cost of certain components of generation by wind or solar or nuclear, or about other aspects of the analysis that require speculation (such as what efficiency will be

---

[127] *South Louisiana Environmental Council, Inc. v. Sand,* 629 F.2d 1005, 1011 (5th Cir. 1980) (emphasis added). We note that, in *South Louisiana Envt'l Council,* the agency had attempted to actually compute a dollar value of the ''economic benefits'' and weigh them against a computed dollar value of the environmental cost through the use of a numerical cost/benefit ratio, *id.* — a practice we eschew because it would create the impression of accuracy despite a process for deriving the numbers potentially so fraught with uncertainty and error that the actual numerical results could be meaningless. In its analysis of a similar situation, the *South Louisiana Envt'l Council* Court observed that NEPA ''permits, at most, a narrowly focused, indirect review [of the agency analysis] of the economic assumptions underlying a federal project described in an impact statement.'' *Id.*

[128] As opposed to the federally owned project at issue in *South Louisiana Environmental Council, supra* note 127.

[129] Although the Intervenors challenge financial estimates related to the ''cost'' of power, these costs are not the same costs that are required to be analyzed under NEPA at this juncture. ''NEPA is generally regarded as calling for some sort of a weighing of the *environmental costs* against the economic, technical, or other public benefits of a proposal.'' *Claiborne,* CLI-98-3, 47 NRC at 88 (emphasis added). The relative cost of nuclear power, which is unrelated to the environmental costs of the proposal, will only become ripe for challenge when the economic benefits of the project are later addressed at the construction permit or combined license stage.

achieved in future wind or solar technologies), cannot, where there is, as here,[130] great uncertainty, have a material role in the examination, and, if they are to be treated at all, are more properly treated qualitatively rather than quantitatively.[131]

We apply these principles as we address below each specific alleged shortcoming.

a. Alleged Errors Associated with Estimating the Environmental Effects of Combinations of Wind and Solar Power with Natural Gas

First, we address the challenge to the fact that the Applicant and the Staff have examined a combination of wind generation and solar generation with a natural gas-fired power plant whose capacity is equal to the full capacity of the proposed new nuclear plant instead of a smaller capacity designed to give an aggregate capacity (when added to an ''averaged'' capacity assigned to the wind and solar generation) equal to the proposed nuclear facility's 2180 MW. The Intervenors insist that there is a fundamental flaw in the overall analysis rooted in the assumption that the combined facility must contain a full 2180 MW gas-fired plant. They specifically challenge the ''benefits'' side of the balance, arguing, in essence, that the Applicant and the Staff have failed to examine the potential additional income the Applicant would receive because the natural gas plant would not only run to bring the overall generation up to 2180 MW at any particular time (as assumed by the Applicant and Staff in their analyses), but would also run when it can profitably do so, even if the solar and/or wind generation were simultaneously running.[132]

We note first that Intervenors have not challenged the ''environmental impact'' side of the Applicant's or the Staff's analysis, which assumed, for the purposes of assessing the environmental impacts of such a combination, that the 2180 MW natural gas-fired plant would not be running at full capacity when the solar and/or wind power portions are generating, and therefore not contributing to the

[130] The Parties have acknowledged that the estimated cost at which new nuclear power can be produced is highly uncertain, *see, e.g.,* Summary Disposition Motion, Joint Affidavit of William D. Maher and Curtis L. Bagnall (Mar. 17, 2005), pt. IV [hereinafter Maher/Bagnall Aff.]; Intervenors' Response to Summary Disposition Motion, Affidavit of Bruce Biewald (Apr. 6, 2005), pt. IV.B [hereinafter Biewald Aff.], and have similarly indicated the large potential uncertainties regarding the cost of production of power from either solar or wind generation, *see, e.g.,* Maher/Bagnall Aff., pt. V.A.2, pts. V.B.1 and 2; Biewald Aff., pt. IV.B.

[131] *See supra* note 62 and accompanying text.

[132] *See* Motion to Amend at 20. But, in estimating the cost of power from the combination, Intervenors have assumed that the capacity of the gas-fired portion will be only 1691 MW instead of the 2180 MW to which the combination is to be compared. *See* Biewald Aff., Table 6. This selective inconsistent approach to its presentation distorts and misrepresents the situation and is not constructive to enabling the Board to weigh the arguments and the facts.

environmental impact at those times. This assumption used by the Applicant and Staff clearly reduces the computed environmental impact of the natural gas-fired portion of the combination, and therefore minimizes the computed overall environmental impact of the combination for the purposes of the comparison to the environmental impact of the proposed new nuclear plant. This minimization is particularly clear for the DEIS analyses where it was assumed that the solar and wind portions of the combined facility had *no* environmental impacts — all of the environmental impacts of the combination were assumed to be associated with the natural gas generation.[133]

We agree with the Staff, therefore, that, as it relates to evaluation of the combination, the DEIS did not overstate the impacts of wind power in favor of nuclear power;[134] in fact, if anything, it did just the opposite because the DEIS found the nuclear option to be environmentally preferable even though it both assumed no adverse environmental impact from the solar and wind generation and minimized the contribution from the natural gas component by assuming that it would run only when necessary to bring the total generation at any time up to the 2180 MW (i.e., the gas-fired generation would generate the difference between the desired 2180 MW and the power being generated by solar and wind at that time). If the natural gas-fired plant were to run during additional periods as proposed by the Intervenors, the environmental impact of the combination would be correspondingly increased, and, while there would be some clear economic benefit to the Applicant, we see no reason to require a comparison of such a scenario when it is apparent that the environmental impacts would indeed be greater than those already estimated for the combination and found less preferable than the proposed nuclear power plant. In addition, as we have noted earlier, 10 C.F.R. §§ 52.17(a)(2) and 52.18 expressly exclude a requirement to assess benefits at all in this case, and therefore this challenge fails for the reasons mentioned above in this regard. Thus this portion of the contention contained in the Intervenors' proposed amendment is inadmissible in that it constitutes an impermissible challenge to Commission regulations and fails to raise a material legal or factual issue.[135]

---

[133] *See* Staff Response to Summary Disposition Motion at 12 (citing DEIS at 8-22, 8-23). The Staff points out that all of the environmental impact was therefore attributable to the portion associated with natural gas generation, and refers to the DEIS at 8-22 wherein it is stated: ''The impacts associated with the combined-cycle natural-gas-fired units would be the same as shown in Table 8-2 [''Summary of Environmental Impacts of Natural Gas-Fired Power Generation — 2200 MW(e)''] with magnitudes scaled for reduction in capacity from 2200 MW(e) to 1650 MW(e).''

[134] *See* Staff Response to Summary Disposition Motion at 10-11, where the Staff responded to alleged deficiencies raised by the Intervenors in their motion to amend, *see* Motion To Amend at 12-14.

[135] *See* 10 C.F.R. § 2.309(f)(1)(vi); *see also* LBP-04-17, 60 NRC at 241, 242-43.

b. Alleged Errors in Underlying Facts

Intervenors claim the Applicant used flawed and outdated information in its original ER and continues, despite the new information, to use flawed and outdated information in its ER and that the Staff similarly uses flawed and outdated information in the DEIS. EGC's updated information (supplied in its responses to RAIs) referenced twenty-four reports issued between 2001 and 2004, including a number of reports on wind and solar power issued by the U.S. Department of Energy (''DOE'') in 2004, together with references to a number of the Intervenors' exhibits.[136] Similarly, Chapter 8 of the DEIS provides recent references. Both the Applicant and the Staff argue that these updates ''cure'' the omissions alleged by Intervenors as to admitted Contention 3.1[137] and, as is relevant here, that the Intervenors have raised no material issue with regard to the new information provided in the RAI response and/or DEIS.

The remaining sections of this part of our analysis consider, point-by-point, each specific shortcoming alleged by the Intervenors in amended Contention 3.1 relative to the Applicant's documents as amended through April 22, 2005, and/or the DEIS. The analyses set out in earlier portions of this ruling contribute materially to our evaluation below of the specific alleged instances of use by the Applicant and the Staff of outdated and erroneous data in the assessment of the potential environmental effects of various alternatives and in the assessment of the estimated cost of power generated by the proposed nuclear facility or one of the alternative generation possibilities.

(i) INTERVENORS' GENERAL ARGUMENTS IN THE PROPOSED AMENDMENT REGARDING ERRORS

First, Intervenors make a generalized contention that: (a) the use by the Staff of the categorizations of SMALL, MODERATE, and LARGE based on Appendix B to 10 C.F.R. Part 51 is not mandatory and, therefore, the Board may ignore those classifications; and (b) the assignment of particular categories to natural gas generation when examining combinations and the concurrent assignment of no category to wind or solar was the cause for the Staff's finding that the combination was not preferable from an environmental impact perspective to nuclear.[138] The Staff, however, points out that it assigned *no* negative environmental impacts to wind or solar in assessing the environmental impacts of the combination, and therefore (a) of course no such category was assigned; and (b) as discussed above,[139] it is evident that the analysis performed and reflected in the DEIS is based

[136] *See* Summary Disposition Motion at 14.

[137] *See infra* Part IV.

[138] *See* Motion To Amend at 10-11 & n.3.

[139] *See supra* notes 127 and 128 and accompanying text.

upon assumptions that minimize the estimated environmental impact from the combination. Furthermore, Intervenors offer no specific evidence to support any different finding. Additionally, even if the Staff had used such categorizations, that use is permissible under the NRC's regulations.[140] Therefore, we find inadmissible — as lacking the requisite degree of specificity under 10 C.F.R. § 2.309(f)(1)(vi) and lacking adequate expert support under 10 C.F.R. § 2.309(f)(1)(v)[141] — this portion of Intervenors' proposed amendment. In addition, we find that, insofar as this is a component of Intervenors' motion to amend Contention 3.1, it is inadmissible as it is not based upon data or conclusions that differ *significantly* from those in the Applicant's documents (prior to responding to the RAIs).[142]

Second, Intervenors contend, generally, that the estimated environmental impacts in the DEIS and in the Applicant's documents overestimate impacts of clean energy and underestimate impacts of nuclear power.[143] This generalized portion of the proposed amended contention is inadmissible because it is a bare assertion lacking any support and the requisite specificity.[144]

Third, Intervenors contend that ''the most fundamental flaw'' in the DEIS and the Applicant's environmental analysis is that EGC has identified numerically more areas that would be impacted by nuclear power than by wind or solar, and that fact alone should make wind and/or solar preferable.[145] This portion of the contention also is a bare assertion; Intervenors have presented no impact analyses whatsoever to support their proposition that because one or another alternative has numerically more areas impacted, the overall environmental impact is greater. One could easily construct hypothetical examples where only one area was adversely impacted but the impact was so severe that the overall environmental impact was considerably worse than an alternative proposal that had dozens of areas impacted minimally. This contention is, therefore, inadmissible.[146]

Fourth, Intervenors contend that the Applicant and the Staff analyses use too small a portion of wind and solar in the combination that was analyzed, speculating that the environmental impact of the fossil-fired portion would be reduced if the wind and solar components were increased,[147] thereby decreasing

---

[140] *See* 10 C.F.R. Part 51, App. B.

[141] *See also* LBP-04-17, 60 NRC at 241-43.

[142] *See* 10 C.F.R. § 2.309(f)(2); *see also supra* Part III.B.1.

[143] *See* Motion To Amend at 11.

[144] *See* 10 C.F.R. § 2.309(f)(1)(v)-(vi); *see also* LBP-04-17, 60 NRC at 241-42.

[145] *See* Motion To Amend at 11.

[146] *See* 10 C.F.R. § 2.309(f)(1)(v); *see also* LBP-04-17, 60 NRC at 241-42.

[147] *See* Motion To Amend at 20. The Intervenors cite to the Biewald Affidavit to support this claim; however, the cited Part III.B offers no support for that proposition other than to cite to, and characterize as having ''no real meaning,'' a statement in the Applicant's RAI response to this general effect. *See* Biewald Aff. at 3-4.

overall environmental impacts of the combination and making the combination more attractive vis-a-vis nuclear. While this assertion appears on its face to have merit and has support in the Applicant's responses to RAIs, it is clear that the sun will not shine at night and certainly the wind will not be blowing at all times at night,[148] so the fossil-fired component will certainly have some minimum amount of run time. In addition, the ''cost analysis'' portion of the balance would clearly be impacted because the capital cost of additional wind and solar capacity would increase while the capital required to be invested in the fossil-fired component could not decrease because of the need to generate the minimum baseload power generated by the proposed nuclear plant. Nothing is presented by the Intervenors to indicate that any of these effects have been even superficially analyzed by them to support this assertion. Absent a specific analysis of the actual wind potential and the actual solar potential and the respective costs of increased capacity for both, this portion of the contention also amounts to speculation without support; i.e., it is a bare assertion and is therefore inadmissible.[149]

In addition to the foregoing general portions of the proposed amendment to the contention, the Intervenors' proposed amendment presents a number of specific challenges.

(ii) SPECIFIC CHALLENGES SET OUT IN THE PROPOSED AMENDED CONTENTION 3.1

The specific challenges (which, if properly supported, could be viewed as ''bases'' in the parlance of our regulations) fall into two general categories: (1) those that challenge assumptions or data used in the environmental impact assessments, and (2) those that challenge economic assumptions and data underlying the ''benefit'' side of the balancing. We address these in that order.

(1) Specific Facts Affecting Environmental Impact Assessment

In the proposed amendment to Contention 3.1, Intervenors raise six specific matters regarding environmental impacts. *First* is an argument that the ER has assumed an erroneously low capacity factor for wind energy (using between 17% and 29% instead of 35%), leading to an overestimate of the land necessary for a comparable wind farm and, at the same time, in considering the nuclear option has ignored the land to be used in mining uranium and storing waste, and has also ignored the fact that land used for waste storage is used for a longer period

[148] *See supra* note 113 and accompanying text.

[149] *See* 10 C.F.R. § 2.309(f)(1)(v); *see also* LBP-04-17, 60 NRC at 241-42.

of time.[150] These challenges regarding land use for the mining and waste storage associated with nuclear power are, however, an impermissible challenge to the Commission's regulations;[151] EGC is permitted by 10 C.F.R. §§ 51.51 and 51.23, respectively, to rely upon Table S-3 to evaluate the effects of the uranium fuel cycle, and the Waste Confidence Rule (''WCR'') for its findings regarding waste disposal.[152] Therefore, these portions of this challenge are inadmissible.

As to the land use by wind power, in addressing the alleged errors in capacity factor, the Applicant points out that any projected change in capacity factor depends upon future developments of technology. Assessment of such errors is therefore, in our view, clearly speculative.[153] Furthermore, the change that this difference could make is only upon the land used by the wind power facility, a small portion of the environmental impact which plays a correspondingly smaller role in the environmental impact assessment.[154] Thus we find that, even if correct, the minor change this could make in the (already small) projected environmental impact of the wind portion of a combination facility or of a wind/energy-storage facility, is such that this portion of the contention neither raises a genuine dispute on a material issue nor is based upon data or conclusions that differ significantly from those in the Applicant's documents (prior to responding to the RAIs). Therefore, this portion of the proposed amendment is inadmissible under 10 C.F.R. § 2.309(f)(1)(vi) and (f)(2).

The *second* specific environmental impact portion of the proposed amendment is an assertion that the environmental impact on bird deaths is erroneously computed; Intervenors argue that wind turbines have historically only killed 2 birds per year while there are data from the Susquehanna nuclear power plant to the effect that 1500 birds were killed over an 8-year period (i.e., somewhat less than 200 bird deaths per year).[155] Intervenors' statement, however, misrepresents the number of bird deaths per year to be expected from a wind farm; both the Intervenors' expert and the Applicant (who cited the same study) state that the

---

[150] *See* Motion To Amend at 12-13. We note that, while Intervenors focus upon the environmental effects of processes ancillary to the nuclear power plant construction and operation, no party has even mentioned the ancillary environmental impacts associated with manufacturing solar cells or wind turbines.

[151] *See* LBP-04-17, 60 NRC at 241.

[152] A previous decision in this proceeding held, in response to Intervenors' original contention EC 3.2 asserting that the Waste Confidence Rule does not apply to this proceeding, that the contention impermissibly challenged the Commission's regulatory requirements and was therefore inadmissible. *See id.* at 246-47. For this same reason, newly raised arguments in the amended contention that challenge long-term disposal of waste are rejected.

[153] *See* Applicant Response to Motion To Amend at 25-26.

[154] The DEIS, in fact, assigned *zero* environmental impact to the wind portion of a combined facility. *See supra* note 133 and accompanying text.

[155] *See* Motion To Amend at 13.

number of avian deaths from a wind farm is 2 birds per year *per turbine.*[156] Thus, when one considers that a current state-of-the-art large wind turbine generates approximately 2 MW, a 2000 MW wind farm would have 1000 wind turbines and would therefore cause 2000 bird deaths per year. This portion of the proposed amendment to Contention 3.1 is inadmissible because it fails to raise a genuine dispute and is not based upon data or conclusions that differ significantly from those in the Applicant's documents (prior to responding to the RAIs).[157]

The *third* specific environmental impact portion of the proposed amendment is a contention that the noise from a wind farm (alleged to be in the range of 35-45 decibels acoustic (''dB(A)'')) is incorrectly weighed against that of a nuclear plant (alleged to be approximately 55 dB(A)).[158] These numbers, cited by the Intervenors, are precisely those used by the Applicant; i.e., this portion of the proposed amendment is not based upon any data or conclusions that differ at all (let alone ''significantly'') from those in the Applicant's documents (prior to responding to the RAIs). In addition, the Applicant pointed out in its response that the ER states that, because noise level varies with distance from the source, the noise from a wind farm would be SMALL. Moreover, as mentioned above, the Staff assigned *zero* environmental effects to the wind power portion of the combined facility. Therefore, the ER and the DEIS have already weighed these relative effects favorably to the Intervenors' position, and there is no genuine dispute over any material fact. Thus, this portion of the proposed amended contention is inadmissible under 10 C.F.R. § 2.309(f)(1)(vi) and (f)(2).

The *fourth* specific environmental impact portion of the proposed amendment is a contention that the air quality impacts computed for nuclear are erroneous because they ignore the effects of the uranium fuel cycle,[159] while the *fifth* specific portion of the proposed amendment is a contention that the Applicant's filings and the DEIS improperly evaluate the impacts of exposure to radioactive wastes from mining and disposal.[160] As we noted earlier, these portions of the proposed amendment are inadmissible because they are impermissible challenges to the Commission's regulations;[161] EGC is permitted by 10 C.F.R. § 51.51 to rely upon Table S-3 of that section to evaluate the effects of the uranium fuel cycle.[162]

---

[156] Biewald Aff. at 4; Applicant Response to Motion To Amend at 23.

[157] *See* 10 C.F.R. § 2.309(f)(1)(vi) and (f)(2).

[158] *See* Motion To Amend at 13.

[159] *See id.*

[160] *See id.* at 14.

[161] *See* LBP-04-17, 60 NRC at 241.

[162] Section 51.51(a) states that Table S-3, ''Table of Uranium Fuel Cycle Environmental Data,'' shall be taken

(Continued)

The *sixth* specific environmental impact portion of the proposed amendment is a contention that the DEIS understates the risks presented by serious accidents at the proposed nuclear plant, particularly the risk posed by terrorist attacks.[163] This portion of the proposed amendment is inadmissible in that the Intervenors fail to provide adequate factual support or expert opinion regarding accidents,[164] and because the specific issue of risks from terrorist attacks is outside the scope of the proceeding.[165]

(2) Specific Facts Affecting Economic Assessment

The remainder of the specific portions of the proposed amendment all relate, in one way or another, to the economic portions of the comparison. Admissibility of these portions of the contention, which rest on a challenge to assumptions that are used in the ''benefits'' analyses, is affected by the plain language of sections 52.17(a)(2) and 52.18, which expressly eliminate any requirement that Applicant consider benefits in its ER or that the Staff consider benefits in its DEIS and FEIS. In fact, the Staff asserted that it does not (and need not) consider economic costs at all in assessing alternatives (or combinations of alternatives) to new nuclear power plants for early site permits.[166] While we do not consider the cited reference suitable authority for the proposition the Staff asserts, there is sound authority for that position in the plain language of section 52.18. Thus Intervenors' challenges in these matters are singularly directed at the content of the Applicant's documents. Analysis of this portion of the proposed amendment to Contention 3.1 must weigh the fact that NEPA places obligations on the NRC, not upon the Applicant, and the purpose of the NRC's requirement that the Applicant submit an ER, the required content of which is spelled out generally in 10 C.F.R. § 52.17(a)(2), is to provide essential information to the Commission so

---

> as the basis for evaluating the contribution of the environmental effects of uranium mining and milling, the production of uranium hexafluoride, isotopic enrichment, fuel fabrication, reprocessing of irradiated fuel, transportation of radioactive materials and management of low level wastes and high level wastes related to uranium fuel cycle activities to the environmental costs of licensing the nuclear power reactor . . . and *may be* supplemented by a discussion of the environmental significance of the data set forth in the table as weighed in the analysis for the proposed facility.

10 C.F.R. § 51.51(a) (emphasis added).

[163] *See* Motion To Amend at 14.

[164] *See* 10 C.F.R. § 2.309(f)(1)(v); *see also* LBP-04-17, 60 NRC at 241-42.

[165] *See* 10 C.F.R. § 2.309(f)(1)(iii); *see also* LBP-04-17, 60 NRC at 241.

[166] *See* Staff Response to Motion To Amend at 11 (citing NRR Review Standard RS-002, Attachment 3 ''Early Site Permit Scope and Associated Review Criteria for Environmental Report'' (May 3, 2004) at 13, ADAMS Accession No. ML040700772). Intervenors also observe, in their motion to amend, that the DEIS does not discuss costs in its analysis of various clean energy alternatives. *See* Motion To Amend at 15.

that it can be adequately informed in preparation of its environmental assessment. But any discussion of benefits included in the Applicant's documents is purely voluntary,[167] and was, in the end, used by the Applicant to assist in its business decision regarding which method of power generation might be least costly, and it is clear that the NRC does not involve itself with the business decisions of an Applicant.[168] Although the Staff is to review the ER, the content and accuracy of the DEIS and FEIS are the sole responsibility of the Agency.[169] Examination of costs of the various alternatives would clearly be, if it were required to be included, a *de minimis* portion of the alternatives investigation. The cost to build or own, or generate power from, any of the particular technologies plays no role whatsoever in the NEPA balance required by our regulations for an application for an ESP; the balance focuses singularly upon the environmental impacts. In these circumstances, the allegation that the Applicant's cost calculations are erroneous neither rises to the level of *significance* required by section 2.309(f)(2) for admissibility of a contention amendment, nor does it raise a *genuine* dispute on a material legal or factual issue.[170]

With these principles in mind, we turn to the specific cost-related errors alleged by Intervenors.

The *seventh* portion of the proposed amendment contends that the cost of wind power is overestimated, stating that EGC has estimated the cost of wind power at 5.7 cents per kilowatt hour (''c/kWh'') while Northern States Power (''NSP''), a Minnesota energy company, purchases wind power at 3.5 c/kWh.[171] This bare statement, however, fails to note that the principal underlying reason that NSP can purchase wind power at 3.5 c/kWh is that the IPP that sells power to NSP gets a Production Tax Credit (''PTC'') of approximately 2 c/kWh that offsets most of the gap,[172] and fails to note that the PTC is currently available only for wind plants placed in service prior to 2006.[173] In addition, Intervenors' own expert indicated that the cost of production for wind power will be in the

---

[167] Although 10 C.F.R. § 52.17(a)(2) states at the outset that the Applicant must submit an ER as required by 10 C.F.R. § 51.45, it goes on to expressly eliminate the requirement for a benefits assessment. This express provision supercedes the general requirement of section 51.45 that would otherwise require such an analysis. Thus the implication by Intervenors that there is such a requirement is based upon a faulty premise: the lesson here is, to paraphrase Ayn Rand's John Galt, the law abhors a contradiction — if you believe there is a contradiction, check your premises.

[168] *See, e.g., HRI,* CLI-01-4, 53 NRC at 48 (''The NRC, however, is not in the business of regulating the market strategies of licensees'').

[169] *See supra* note 64 and accompanying text.

[170] *See* 10 C.F.R. § 2.309(f)(1)(vi), (f)(2); *see also* LBP-04-17, 60 NRC at 243.

[171] *See* Motion To Amend at 15.

[172] *See* Applicant Response to Motion To Amend at 28-29; Biewald Aff. at 18.

[173] *See* Applicant Response to Motion To Amend at 29.

range of 4.5 to 6.0 c/kWh,[174] which does not disagree at all with the Applicant's estimate. Intervenors have offered no evidence or expert testimony that the PTC will be available to an IPP placing a wind power facility into service after 2006. Furthermore, Intervenors apparently overlook the Applicant's statement in its RAI response that a wind generating facility can ''produce power at a levelized rate of $.049/kWh,''[175] which is close to the low end of the range suggested by Intervenors' expert. Therefore the challenge to cost estimates for wind power is inadmissible because: (a) regarding the PTC and the estimated cost of wind power after inclusion of the Applicant's responses to the RAIs, there is no genuine dispute over any material fact and therefore it fails to satisfy the requirements of 10 C.F.R. § 2.309(f)(1)(iv) and (vi);[176] and (b) it is not based upon data or conclusions that differ significantly from those in the Applicant's documents prior to responding to the RAIs and therefore fails to satisfy the requirements of 10 C.F.R. § 2.309(f)(2). Therefore, we find that this portion of the proposed amended contention is inadmissible.

The *eighth* portion of the proposed amendment contends that the cost estimates for new nuclear generated power are erroneous because: (1) they generally ignore statements by the DOE, the Energy Information Administration (''EIA''), and other entities to the effect that new nuclear will not be economic;[177] (2) they use overly optimistic assumptions, such as that capital cost will be only $1200/kW, and the ''learning rate'' will be 10%, when the actual costs of constructing the seventy-five existing plants was more than 200% above estimates;[178] and (3) a recent Massachusetts Institute of Technology study estimates that the cost of future nuclear power will be 6.7 c/kWh, whereas EGC is estimating 5.5 c/kWh.[179] The Applicant points out that the study referenced by the Intervenors as the source for the $2000 per kW(e) capital cost estimate itself stated that cost could be reduced by 25% (i.e., to $1500 per kW(e)) ''to match optimistic but plausible forecasts.''[180] In point of fact, however, the relative capital cost estimates set out in the particular study cited by Intervenors vary from a low of $1080 per kW for a mature technology to a high of $1980 for a new design.[181] The foregoing clearly

[174] Biewald Aff. at 22, Table 6.

[175] RAI Response at 6.

[176] *See also* LBP-04-17, 60 NRC at 242-43.

[177] *See* Motion To Amend at 16.

[178] *See id.*

[179] *Id.* at 17.

[180] *See* Applicant Response to Motion To Amend at 30.

[181] *See* Biewald Aff. at 15, Table 3.

indicate that projecting costs is an uncertain endeavor, and should, as a result of the uncertainties, be given less weight by the agency.[182]

Given the uncertain nature of the results of this part of the analysis, the fact that it falls on the non-environmental side of the balance, and the fact that cost would only come into the analytical balancing *if* the environmental impact balancing indicates that a reasonable alternative is environmentally preferable to the proposed project,[183] we find that these portions of the proposed amendment: (a) do not raise a genuine dispute over a material legal or factual issue; and (b) are not based upon data or conclusions that differ significantly from those in the Applicant's documents (prior to responding to the RAIs).[184] Furthermore, because the cost information provided by the Applicant was voluntarily included and expressly not required by the regulations governing the content of the ER, the DEIS, or the FEIS, these particular portions of Intervenors' proposed amendments are an improper challenge to NRC regulations and outside the scope of this proceeding, given there was no requirement for such an analysis by the Applicant or the Staff in the first instance.[185]

IV. ANALYSIS OF APPLICANT'S MOTION FOR SUMMARY DISPOSITION OF CONTENTION 3.1

A. Legal Standard for Summary Disposition

Pursuant to the NRC's 10 C.F.R. Part 2 regulations governing procedure, a licensing board may grant summary disposition as to all or any part of a proceeding if the board finds that ''the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material

---

[182] Finally, we note that, in addition, this portion of the proposed amendment to Contention 3.1 posits that the cost for a combination of wind and natural gas generation would be able to produce power in a range of 4.6-5.0 c/kWh, but that estimate is based upon the premise that the gas-fired plant will have only 1691 MW generation capability (as opposed to the 2180 MW for the nuclear plant), thus underpredicting the capital cost and other costs related to the gas-fired portion of the combination for the situation being examined (which is that the gas-fired portion of the combination must have the full capacity of the nuclear plant). This inaccurate comparison cannot be deemed to create a genuine dispute and is therefore inadmissible. 10 C.F.R. § 2.309(f)(1)(vi); *see also* LBP-04-17, 60 NRC at 243.

[183] *See* Applicant Response to Motion to Amend at 27; *see also, e.g., Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-584, 11 NRC 451, 458 (1980); *Consumers Power Co.* (Midland Plant, Units 1 and 2), ALAB-458, 7 NRC 155, 162-63 (1978); *Public Service Co. of Oklahoma* (Black Fox Station, Units 1 and 2), LBP-78-26, 8 NRC 102, 161-62 (1978).

[184] *See* 10 C.F.R. § 2.309(f)(1)(vi), (f)(2); *see also* LBP-04-17, 60 NRC at 243.

[185] *See* LBP-04-17, 60 NRC at 241.

fact and that the moving party is entitled to a decision as a matter of law.''[186] It is well established that summary disposition motions under the Commission's Part 2 rules are held to the same standards by which the federal courts evaluate Federal Rule of Civil Procedure 56 summary judgment motions.[187]

The party seeking summary disposition bears the burden of showing that there is no genuine issue as to any material fact,[188] and 10 C.F.R. § 2.710 requires that this be shown through a statement of material facts not at issue and any supporting materials, such as affidavits, discovery responses, and documents, accompanying the motion.[189] Nevertheless, a party opposing the motion must put forth specific facts showing that there is a genuine issue of material fact to be litigated,[190] and any material facts set forth in the movant's statement not controverted by a like statement of an opposing party are deemed admitted.[191]

The Board's function in considering summary disposition is only to decide whether genuine issues of material fact remain between the parties, not to substantively seek to resolve material factual issues that do exist.[192] To support a finding that there *is* a genuine issue of material fact, the factual record, when considered in its entirety, must be in doubt to such a degree that it is necessary to hold a hearing to aid in resolving the factual dispute.[193] It is, nevertheless, appropriate to look into the substance of the contention to the degree necessary to make the determination whether a genuine dispute about a factual issue exists, and whether, if one does, that dispute is indeed over a ''material'' fact.[194] In other words, summary disposition should not be used to decide genuine issues

---

[186] *See* 10 C.F.R. § 2.710(d)(2). As we have noted on prior occasions, this proceeding is a Subpart L proceeding (i.e., is governed by the procedural rules found in 10 C.F.R. Part 2, Subpart L); 10 C.F.R. § 2.1205 is therefore the applicable section on summary disposition, which itself directs this Board to apply the standards set forth in Subpart G of this Part, or section 2.710.

[187] *See, e.g., Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102 (1993).

[188] *See id.*

[189] *See, e.g.,* Statement of Material Facts on Which No Genuine Issue Exists in Support of Exelon's Motion for Summary Disposition of Contention 3.1 (Mar. 17, 2005); Statement of Disputed Facts in Support of Intervenors' Response to Exelon's Motion for Summary Disposition of Contention 3.1 (Apr. 6, 2005).

[190] 10 C.F.R. § 2.710(b).

[191] 10 C.F.R. § 2.710(a).

[192] *See Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-17, 39 NRC 359, 361 (1994) (citing *Weiss v. Kay Jewelry Stores, Inc.,* 470 F.2d 1259, 1261-62 (D.C. Cir. 1972)).

[193] *See, e.g., Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), LBP-83-46, 18 NRC 218, 223 (1983).

[194] *Cf. Anderson v. Liberty Lobby,* 477 U.S. 242, 248 (1986).

of material fact that warrant an evidentiary hearing,[195] but is appropriate if the moving party makes a properly supported showing as to the absence of any genuine issue of material fact and the opposing party fails to show that such an issue does exist.

B. Board Ruling

We preface our analysis by further clarifying the scope and subject matter of Contention 3.1 as admitted. While formulated as a general contention that the ER fails to rigorously explore and objectively evaluate all reasonable alternatives (and the Intervenors have moved to include the DEIS in this challenge), the substance is most properly addressed by focusing upon the details of the challenge and upon the Standing/Contentions Board's prior ruling in admitting it, wherein the contention, as rewritten, was admitted only:

> to the degree it allege[d] (a) a failure by EGC in its evaluation of the alternatives that could be used by an independent power provider in its power generation mix adequately to address a combination of wind power, solar power, natural gas-fired generation, and ''clean coal'' technology [ ]; and (b) the Applicant's use of potentially flawed and outdated information regarding wind and solar power generation methods [ ].[196]

The admitted contention must therefore be read and construed in light of these statements. In addition, while the text of the contention is quite general, it is interpreted and has meaning only to the extent of the ''bases,'' or specific flaws identified in the Intervenors' submittals, which define its scope.[197]

As discussed above, Intervenors claim the Applicant used flawed and outdated information in its original ER and continue, despite new information, to use flawed and outdated information in its RAI response,[198] which was produced in the form of revisions to relevant sections of the ER. The Applicant argues, however, and the Staff agrees, that these updates to the information provided in the original ER ''cure'' the alleged omissions and that Contention 3.1, as a contention

---

[195] *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 509 (2001).

[196] LBP-04-17, 60 NRC at 246.

[197] *See, e.g., Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 (2002) (appropriate to refer to the bases provided in support of a contention to define the scope of that contention); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 (1988) (''[t]he reach of a contention necessarily hinges upon its terms coupled with its stated bases''), *aff'd sub nom. Massachusetts v. NRC,* 924 F.2d 311 (D.C. Cir. 1991), *cert. denied,* 502 U.S. 899 (1991).

[198] *See* Intervenors' Response to Summary Disposition Motion at 5.

of omission, is now moot.[199] The Intervenors, on the other hand, continue to assert that Contention 3.1, as admitted, is *not* a contention of omission, but is instead a challenge to the substance of the Applicant's discussion of alternatives in the ER. In fact, the original contention contains two separate challenges by the Intervenors. First, it presented an alleged omission from the ER of analyses of certain combinations of generation technologies. Second, the Intervenors proffer an allegation that the ER used potentially flawed and outdated information relative to wind and solar power, which we take, in light of the Intervenors' detailed pleadings, to mean an allegation that newer data were not examined (i.e., failure to consider newer data) and that certain data were erroneous (i.e., ''flawed'').

We do not need, however, to resolve the issue of whether admitted Contention 3.1 should be viewed simply as one of ''omission,'' as we find, as discussed below, that the Applicant in its responses to the RAIs has (a) supplied the allegedly omitted analysis of combinations of generation technologies, and (b) addressed the allegedly outdated and erroneous information by considering (i) the information identified by the Intervenors in support of Contention 3.1, and (ii) other information not previously identified by the Intervenors.

As noted above, the Applicant seeks summary disposition of the original contention, while the Intervenors have sought to amend that contention in light of additional information provided by the Applicant in its responses to the RAIs, as well as information contained in the DEIS. We considered in Part III, *supra,* point-by-point, the Intervenors' proposed amendments to that contention, including each specific alleged shortcoming in the ER and, as specified in the Intervenors' response to the summary disposition motion (and as further elaborated on in its motion to amend), each specific alleged shortcoming in the Applicant's documents included in the RAI response as well as shortcomings in the DEIS. Based on that analysis, we found no portion of the proposed amendment admissible. Thus, we have remaining before us the original Contention 3.1, which the Applicant asserts is amenable to summary disposition in its favor.

As to the original contention's alleged omissions from the ER of analyses of certain combinations of generation technologies, we find summary disposition appropriate because those omissions have been cured by the Applicant's consideration, in its RAI responses, of the allegedly omitted combinations, making this Intervenor claim moot so as to be resolved in the Applicant's favor. As

---

[199] *See* Summary Disposition Motion at 13-15; Staff Response to Summary Disposition Motion at 4-5. In this regard, we must bear in mind that at issue here (with regard to the mootness of Contention 3.1) is *only* information regarding wind and solar — *not* information regarding nuclear, as none of the bases upon which Contention 3.1 was admitted alleged any error in data underlying the analysis of the nuclear power option. Thus, to the extent that the Intervenors now seek to challenge information regarding nuclear power, it must be based upon *new* information or there must have been a request to admit a late-filed contention as to those matters.

to the allegation that certain data in the ER relative to wind and solar power are outdated or flawed, we find summary disposition appropriate because the Applicant has considered (1) the information provided or cited by the Intervenors in support of that portion of Contention 3.1, which the Intervenors themselves impliedly assert provides an adequate foundation for an analysis of wind and solar alternatives; and (2) other new information not considered in the original ER, to which Intervenors have not posited an admissible challenge. Intervenors having failed to demonstrate that a disputed genuine issue of material fact exists relative to the adequacy of the Applicant's supporting data, the Applicant is entitled to judgment as a matter of law on that portion of the contention as well.

Based on the preceding, we find that: (1) there being no genuine issue as to any material fact relative to the Applicant's demonstration that it has adequately addressed the NEPA analysis deficiencies claimed in Contention 3.1 as originally admitted such that the Applicant is entitled to judgment as a matter of law, summary disposition of this contention is granted in favor of the Applicant; and (2) there being no remaining matter at issue in the contested portion of this proceeding, the contested portion of this proceeding is terminated.[200]

V. CONCLUSION

For the reasons set forth above, we find that the Intervenors have failed to proffer any admissible amendment in their proposed amendment to Contention 3.1. We further find that, there being no genuine issue of material law or fact in dispute with regard to Contention 3.1 as originally admitted, summary disposition in favor of the Applicant is granted. Finally, there being no admitted contention remaining to be litigated in this proceeding, the contested portion of this proceeding is terminated.

For the foregoing reasons, it is this 28th day of July 2005, ORDERED, that:

1. The Intervenors' April 22, 2005 motion to amend is *denied.*

2. The Applicant's March 17, 2005 motion for summary disposition of Contention 3.1 is *granted.*

3. As there remain no admitted issues to be litigated in this proceeding, the contested portion of this proceeding is *terminated.*

4. Any party wishing to file a petition for review on the grounds specified in 10 C.F.R. § 2.341(b)(4) must do so within fifteen (15) days after service of this

---

[200] As was noted in the Standing/Contentions Board's initial ruling, *see* LBP-04-17, 60 NRC at 250 n.10, the Board also must conduct a ''mandatory hearing'' in this proceeding regarding matters that were not the subject of admitted contentions.

Memorandum and Order. The filing of a petition for review is mandatory in order for a party to have exhausted its administrative remedies before seeking judicial review. Within ten (10) days after service of a petition for review, parties to the proceeding may file an answer supporting or opposing Commission review. Any petition for review and any answer shall conform to the requirements of 10 C.F.R. § 2.341(b)(2)-(3).

THE ATOMIC SAFETY AND
LICENSING BOARD[201]

Paul B. Abramson
ADMINISTRATIVE JUDGE

Anthony J. Baratta
ADMINISTRATIVE JUDGE

David L. Hetrick (by G.P. Bollwerk III)
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 28, 2005

[201] Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for (1) Applicant EGC, (2) the Intervenors, and (3) the NRC Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nils J. Diaz, Chairman
Jeffrey S. Merrifield
Gregory B. Jaczko
Peter B. Lyons

In the Matter of **Docket Nos. 50-336-LR**
50-423-LR

DOMINION NUCLEAR CONNECTICUT, INC.
(Millstone Nuclear Power Station,
Units 2 and 3) **August 4, 2005**

RULES OF PRACTICE: CERTIFICATION OF ISSUES TO COMMISSION

It is the Commission's ''customary practice'' to accept Board-certified questions. *See, e.g., Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-9, 61 NRC 235, 236 (2005); *Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-11, 59 NRC 203, 209 (2004); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-12, 53 NRC 459, 461 (2001).

MEMORANDUM AND ORDER

On July 20, 2005, the Licensing Board in this case issued a Memorandum and Order. LBP-05-16, 62 NRC 56. The Board order concluded that Suffolk County's tardiness in submitting its petition to intervene was excusable under the late-filing standards of 10 C.F.R. § 2.309(c). Additionally, the Board found no basis to exclude the County from participation under the contention requirements of 10 C.F.R. § 2.309(f). The Board also certified to the Commission the question

whether to grant Suffolk County's request for an exemption from (or waiver of) 10 C.F.R. § 50.47(a)(1) (which provides that emergency planning issues are not germane to license renewal determinations). Today we grant review of that certified question. In doing so, we follow our ''customary practice'' of accepting Board-certified questions.[1]

We also intend to consider, *sua sponte,* three other questions — (1) whether Suffolk County's late-filed contention was admissible under the criteria for considering late-filed pleadings and contentions set out in 10 C.F.R. § 2.309(c); (2) whether Suffolk County's contention regarding ''emergency planning'' satisfied the contention requirements in 10 C.F.R. § 2.309(f); and (3) whether, under the circumstances of this case, the Board properly postponed its contention-admissibility decision pending settlement talks.

We solicit the views of the adjudication's participants on these three questions, plus the certified question. To this end, we establish the following filing schedule. No later than August 18, 2005, the Staff, Licensee, and Petitioner may file initial briefs, each of which may not exceed 25 pages, exclusive of the tables of contents and authorities (both of which we require). No later than August 25, 2005, the Staff, Licensee, and Petitioner may file response briefs, each of which may not exceed 10 pages and need not include tables of contents and authorities. Each participant should ensure that we *receive* each of its briefs no later than 4:15 p.m. on the due date.

IT IS SO ORDERED.

For the Commission[2]

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 4th day of August 2005.

---

[1] *See, e.g., Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-9, 61 NRC 235, 236 (2005); *Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-11, 59 NRC 203, 209 (2004); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-12, 53 NRC 459, 461 (2001).

[2] Chairman Diaz was not present when this item was affirmed. Accordingly, the formal vote of the Commission was 3-0 in favor of the decision. Chairman Diaz, however, had previously voted to approve this Memorandum and Order and had he been present he would have affirmed his prior vote.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Dr. Jerry R. Kline
Dr. Peter S. Lam

In the Matter of **Docket No. 72-22-ISFSI**
(ASLBP No. 97-732-02-ISFSI)

PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage Installation) **May 27, 2003**

In this 10 C.F.R. Part 72 proceeding regarding the application of Private Fuel Storage, L.L.C. (PFS), for a license to construct and operate an independent spent fuel storage installation (ISFSI) on the Skull Valley, Utah reservation of the Skull Valley Band of Goshute Indians, acting pursuant to a remand from the Commission in CLI-00-13, 52 NRC 23 (2000), the Licensing Board denies the State of Utah's (State) motion to reopen the evidentiary record on contention Utah E/Confederated Tribes F, Financial Assurance (contention Utah E); grants summary disposition in favor of PFS on contention Utah E relative to the model customer service agreement; and denies a related PFS motion to strike portions of the State's response to its summary disposition motion.

RULES OF PRACTICE: REOPENING OF RECORD (RELATIONSHIP TO SUMMARY DISPOSITION)

A parallel exists between motions for summary disposition and motions to reopen the record. As stated by the Appeal Board in *Vermont Yankee Nuclear*

Power Corp. (Vermont Yankee Nuclear Power Station), ALAB-138, 6 AEC 520, 523 (1973) (footnote omitted):

> to justify the granting of a motion to reopen the moving papers must be strong enough, in the light of any opposing filings, to avoid summary disposition. Thus, even though a matter is timely raised and involves significant safety considerations, no reopening of the evidentiary hearing will be required if the affidavits submitted in response to the motion demonstrate that there is no genuine unresolved issue of fact, *i.e.,* if the undisputed facts establish that the apparently significant safety issue does not exist, has been resolved, or for some other reason will have no effect upon the outcome of the licensing proceeding.

Given this parallel, it is appropriate to resolve a motion for summary disposition before considering a motion to reopen.

RULES OF PRACTICE: SUMMARY DISPOSITION

The standard governing summary disposition has been described as follows:

> Under 10 C.F.R. § 2.749(a), (d), summary disposition may be entered with respect to any matter (or all of the matters) in a proceeding if the motion, along with any appropriate supporting material, shows that there is ''no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.'' The movant bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts not at issue and any supporting materials (including affidavits, discovery responses, and documents) that accompany its dispositive motion. An opposing party must counter each adequately supported material fact with its own statement of material facts in dispute and supporting materials, or the movant's facts will be deemed admitted. *See Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993).

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-02-20, 56 NRC 169, 180 (2002).

RULES OF PRACTICE: MOTIONS TO STRIKE

A motion to strike is an appropriate mechanism for seeking the removal of information from a pleading or other submission that is ''irrelevant,'' *Power Authority of the State of New York* (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-01-14, 53 NRC 488, 514 (2001), or, in the context of summary disposition, portions of a filing or affidavit that contain technical arguments based on questionable competence, *see Florida Power & Light Co.*

(Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-85-29, 22 NRC 300, 305 (1985).

RULES OF PRACTICE: REOPENING OF RECORD

The standard for granting reopening set forth in 10 C.F.R. § 2.734 states, among other things, that a motion to reopen a closed record to consider additional evidence will not be granted unless the motion is timely, addresses a significant safety or environmental issue, and demonstrates that a materially different result would obtain had the evidence been considered. *See* 10 C.F.R. § 2.734(a). In addition, the motion must be accompanied by an affidavit setting forth the factual and/or technical bases for the claim. *See id.* § 2.734(b).

RULES OF PRACTICE: REOPENING OF RECORD (MATERIALLY DIFFERENT RESULT)

Under the Commission's record reopening standard, the fact that newly proffered evidence relied upon as the basis for reopening is different from that set forth during the hearing is, in and of itself, not enough. Instead, in an instance when an initial decision has not yet issued, the proponent bears a heavy burden to show, among other things, that had the evidence been considered, a materially different result, i.e., a different outcome, would likely have obtained. *See Kansas Gas and Electric Co.* (Wolf Creek Generating Station, Unit 1), ALAB-462, 7 NRC 320, 338 (1978).

TECHNICAL ISSUE(S) DISCUSSED

The following technical issues are discussed: financial qualifications (independent spent fuel storage installation).

TABLE OF CONTENTS

I. BACKGROUND 192
A. Licensing Board and Commission Rulings on PFS Dispositive Motion Regarding Contention Utah E 192
B. PFS Model Service Agreement 194
C. State Filing Responding to the PFS MSA/State Motion To Reopen/PFS and Staff Responsive Filings 200
1. State Response to PFS MSA 200
2. State Motion To Reopen 201
3. PFS/Staff Responses to State Motion To Reopen 202

D. PFS Summary Disposition Motion/State and Staff Responsive Filings/State Reply Pleading 205
1. PFS Dispositive Motion 205
a. MSA Meets All Financial License Conditions 206
b. PFS Response to State's MSA Objections 208
c. PFS Members as Licensees 213
2. State Dispositive Motion Response 213
a. Cash Reserves 213
b. Change from ''Aggregate Usage'' to ''Reserved Capacity'' 214
c. Construction Loans 214
d. Adequate Operating Revenues 215
e. Cost Recovery and Customer Creditworthiness 215
f. Other Concerns 215
3. Staff Summary Disposition Response 216
4. State Reply to Staff Summary Disposition Response 221
E. PFS Motion To Strike/State Responsive Filing 224
1. PFS Motion To Strike 224
2. State Motion To Strike Response 225

II. ANALYSIS 227
A. PFS Summary Disposition Motion/Motion To Strike 227
1. Summary Disposition and Motion To Strike Standards . . . 228
2. PFS Dispositive Motion 229
a. Scope of Remand/Sufficiency of Previous Summary Disposition Decision 229
b. Adequacy of PFS MSA To Implement the Commission's License Conditions Relative to Contention Utah E 230
(i) Subpart 1 — Adequacy of PFS Ownership Information 230
(ii) Subpart 2 — Adequacy of PFS Financial Base 231
(iii) Subpart 3 — Adequacy of PFS Funding Documentation, Including Business Plan and Subscription Agreements 235
(iv) Subpart 4 — Adequacy of PFS Documentation on Current Financial Status 236
(v) Subpart 5 — PFS Liability for Spent Fuel Casks 236
(vi) Subpart 6 — Inadequate Cost Estimates . . . 237

(vii) Subpart 7 — Adequacy of Existing Market Documentation 239
(viii) Subpart 8 — Propriety of PFS Use of Debt Financing 239
(ix) Subpart 9 — Adequacy of PFS Measures To Address Service Agreement Breach 239
(x) Subpart 10 — Adequacy of PFS Resources for Nonroutine Expenses 241
c. Other Claims Regarding MSA Efficacy 241
3. PFS Motion To Strike 244
B. State Motion To Reopen 244
III. CONCLUSION 246

MEMORANDUM AND ORDER

(Rulings on Summary Disposition Motion and Other Filings Relating to Remand from CLI-00-13)

[*Note*: Although this Memorandum and Order was originally issued in May 2003, it was treated as a nonpublic issuance pending review of challenges by Intervenor State of Utah to claims by Applicant Private Fuel Storage, L.L.C., that pursuant to 10 C.F.R. § 2.790 certain portions of the decision should be withheld from public disclosure as proprietary information. With issuance of the Commission's final decision on that matter, *see* CLI-05-16, 62 NRC 56 (2005), this decision is being publicly released in a redacted form.]

In CLI-00-13, 52 NRC 23 (2000), the Commission affirmed in part and reversed in part rulings made by the Licensing Board in LBP-00-6, 51 NRC 101 (2000), regarding a motion for partial summary disposition filed by Applicant Private Fuel Storage, L.L.C. (PFS), relating to contention Utah E/Confederated Tribes F, Financial Assurance (hereinafter referred to as contention Utah E). As part of its reversal determination, the Commission directed that the Board (1) require PFS to produce a sample service contract outlining the agreements PFS would have with its customers relative to the services it would provide, and compensating payments it would receive, in connection with its proposed Skull Valley, Utah independent spent fuel storage installation (ISFSI); and (2) provide the Intervenors to this proceeding, in particular the State of Utah (State), with an opportunity to address the adequacy of the sample service contract relative to the concerns raised in contention Utah E. PFS has provided such a model service agreement (MSA) that, in turn, has spawned additional party submissions,

including a State motion to reopen the evidentiary record and an additional PFS summary disposition request and related motion to strike.

For the reasons set forth below, we deny the State's motion to reopen the record and the PFS motion to strike and grant summary disposition in favor of PFS on contention Utah E relative to the MSA.

I. BACKGROUND

To place our holding on these various pending matters relating to the PFS sample service agreement in context, we describe below the procedural construct that brought these matters before the Board.

A. Licensing Board and Commission Rulings on PFS Dispositive Motion Regarding Contention Utah E

In LBP-00-6, 51 NRC at 106-08, we set forth in detail the procedural history of the admission of contention Utah E, which we will not repeat here. Also in that March 2000 decision, relative to the issues posited by the PFS dispositive motion at issue, the Board found that only two portions of this financial assurance contention needed to move forward to resolution in an evidentiary hearing: paragraph 6, as it challenged the adequacy of the PFS-proffered facility construction and operation/maintenance cost estimates, and paragraphs 5 and 10, as they questioned the adequacy of PFS onsite liability insurance coverage. *See id.* at 137. In determining that summary disposition was appropriate relative to the other aspects of contention Utah E, the Board found reasonable assurance was provided by two Staff-proposed license conditions and commitments by PFS to include various provisions in the service agreements that would have to be executed by its member and nonmember customers, both of which would be subject to Staff oversight. *See, e.g., id.* at 116-17. Moreover, in doing so the Board found this determination warranted referral to the Commission for its immediate consideration. *See id.* at 136.

Following this summary disposition ruling, in June 2000 the Licensing Board conducted a 4-day closed-session evidentiary hearing regarding the matters implicated by paragraphs 5, 6, and 10. Thereafter, on August 1, 2000, accepting the Board's referral, the Commission found the Staff-proposed conditions acceptable and, indeed, directed that a number of the PFS commitments upon which the Board relied be incorporated as license conditions (LCs) as well. *See* CLI-00-13, 52 NRC at 32. As set forth by the Commission, *id.* at 27, 32, 36, the license

conditions that the Staff is to make applicable to the PFS facility, based on promises made by PFS during the licensing process, are as follows:[1]

> [LC-1. PFS shall] not commence construction before funding, in the amount to be determined at hearing, is adequately committed;
>
> [LC-2. PFS shall] not commence operations before service agreements for the life of the license, with prices adequate to fund operations, maintenance, and decommissioning, in the amount to be determined at hearing, are in place;[2]
>
> [LC-3. PFS shall] include provisions in service agreements requiring customers to retain title to the spent fuel stored and allocating liability among PFS and the customers;
>
> [LC-4. PFS shall] include provisions in the Service Agreements requiring customers to provide periodically credit information, and, where necessary, additional financial assurances such as guarantees, prepayment, or payment bond;
>
> [LC-5. PFS shall] include in the customer service agreements a provision requiring PFS not to terminate its license prior to furnishing the spent fuel storage services covered by the service agreement;
>
> [LC-6. PFS shall] obtain insurance for offsite liability in the amount of $200 million (the maximum amount commercially available); and
>
> [LC-7. PFS shall] obtain insurance covering onsite liability in an amount to be determined at hearing.

The Commission, however, did not agree with the Board's determination that PFS commitments relative to its service agreements provided a sufficient basis for a reasonable assurance finding based on post-licensing Staff inquiry. According to the Commission, without even a draft of the proposed service agreements, there was no basis for determining ''within acceptable bounds, what the agreements' terms will be, how inviolate their provisions will be, and how easy it will be for

---

[1] As the Board noted in LBP-00-6, 51 NRC at 137, the initial license conditions (LCs) were designated by the Staff as LC17-1 and LC17-2 based on nomenclature that tied proposed license condition numbering to the section of its December 15, 1999 PFS facility safety evaluation report (SER) to which the condition related, e.g., SER section 17 concerning financial qualifications and decommissioning funding assurance. In this instance, for ease of reference we adopt the same numbering order as the Commission outlined in CLI-00-13, albeit noting that when actually incorporated into any PFS license these conditions may well be numbered differently.

[2] In CLI-00-13, 52 NRC at 32, relative to this license condition the Commission declared that

> proposed license condition LC 17-2 should be revised to read as follows: ''PFS shall not proceed with the Facility's operation unless it has in place Service Agreements covering the entire term of the license, with prices sufficient to cover the operating, maintenance, and decommissioning costs of the Facility for the entire term of the license.''

NRC verification reviews to determine compliance.'' *Id.* at 34. Consequently, the Commission directed that

> the Board (1) require PFS to produce a sample service contract that meets all financial assurance license conditions, and (2) give Intervenors an opportunity to address the adequacy of the service contract to meet the concerns raised in Contention E. If Intervenors do not raise further objections after reviewing the sample contract, or if the Board finds [I]ntervenors' objections insubstantial, then PFS would be entitled to summary disposition on Utah Contention E. Otherwise, the contention should be set for hearing.

Id. at 35.

B. PFS Model Service Agreement

In response to this Commission mandate and in accordance with Board orders that outlined a schedule for further party filings, including another PFS dispositive motion, *see* Licensing Board Order (Scheduling/Administrative Matters) (Aug. 4, 2000) (unpublished); Licensing Board Order (Schedule for Submission of Sample Service Agreement) (Aug. 16, 2000) (unpublished), on September 29, 2000, PFS submitted its MSA, *see* [PFS] Submission of Model Service Agreement (Sept. 29, 2000) [hereinafter MSA Pleading]. With that agreement, PFS made various, purported nonmaterial changes to the funding scheme it theretofore had proposed relative to its Skull Valley facility,[3] including:

---

[3] In its March 2000 summary disposition ruling, based on the information submitted by PFS in support of its December 1999 dispositive motion the Board described the then-existing PFS funding structure as follows:

> In its license application, describing itself as a limited liability company owned by eight United States utilities, PFS states that its financial qualifications for the requested Part 72 license are, among other things, based on its financing plan to obtain the necessary funds to construct, operate, and decommission the proposed Skull Valley facility. According to PFS, among the financing mechanisms it will use are equity contributions from PFS members pursuant to subscription agreements, preshipment customer payments pursuant to service agreements (through which member and nonmember customers commit to store their spent fuel at the PFS facility and PFS agrees to provide storage services), and annual storage fee payments pursuant to the service agreements. PFS also indicates that it reserves the option to obtain portions of needed construction funds through the sale of debt securities secured by the service agreements. *See* [PFS], License Application for Private Fuel Storage Facility at 1-3 to -4 (rev. 0 June 19[9]7).
>
> PFS then goes on to describe its phased approach to construction and operation. Under already completed Steps I-III, PFS undertook preliminary investigations, formed PFS as a legal entity, and prepared and submitted the license application, the last step being funded by

(Continued)

1. Rather than relying upon a three-segment preshipment base storage fee and an annual storage fee, under the MSA (section 13.2) PFS would now rely largely on a cost-plus concept that would encompass, in place of the first base payment that was intended to cover construction costs by collecting a sum of $10 per kilogram of uranium (kgU) (in 1997 dollars) multiplied by the customer's agreed-upon spent nuclear fuel (SNF) storage ''reserved capacity,'' construction, rail and supplied equipment, and general administrative and operation costs

---

direct payments from PFS members pursuant to the subscription agreements. Step IV, which includes this licensing proceeding, detailed design efforts, and bid specification preparations, is ongoing. The $10 million budgeted for this phase is being financed by PFS members' payments pursuant to the subscription agreements. *See id.* at 1-5 (rev. 1 May 1998).

When and if a license is granted, Step V, the construction phase, will begin. This includes site preparation, construction of an access road and various administration, maintenance, and operations buildings and the cask storage pads, canister transfer and transport equipment procurement, and transportation corridor construction. Its $100 million budgeted cost (in 1997 dollars) is to be financed by $6 million dollars in equity contributions from PFS members pursuant to subscription agreements and, in larger measure, by the service agreements with PFS members and nonmember entities that call for payment spread out over the period of time from construction through spent fuel delivery. According to PFS, raising the nonequity portion of Step V costs through service agreements will allow it to avoid construction financing costs, although it retains the option to finance the nonequity portion of Step V costs through debt financing secured by the service agreements. According to the PFS application, no construction will proceed unless service agreements committing for spent fuel storage services in a nominal target range of 15,000 metric tons uranium (MTU) have been signed. *See id.* 1-5 to -6 (rev. 1 May 1998 & rev. 4 Aug. 1999).

The operational phase for the PFS facility, Step VI, is to be funded by the service agreements. The significant budgeted costs for this phase include procurement and/or fabrication of canisters ($432 million) and storage casks ($134 million), which will be obtained on an as-needed basis to coincide with fuel-moving schedules. According to PFS, all capital costs associated with spent fuel transportation and storage, including canister and storage cask procurement and/or fabrication, will be paid pursuant to the service agreements prior to PFS accepting customers' spent fuel. Also under the service agreements, customers will be required annually to pay ongoing operations and maintenance costs for spent fuel storage, estimated to be $49 million annually for a 20-year facility operating life and $31 million annually for a 40-year life. These costs include labor, operations support, storage canisters, storage casks, transportation fees, transport and storage consumables, maintenance and parts, regulatory fees, quality assurance and other expenses, low-level radioactive waste disposal, contingencies, radiological and nonradiological decommissioning funds, and associated operating costs. PFS states that the service agreements will include escalators that are tied to specific costs of doing business at the site, including such items as labor rates and NRC and insurance fees. Also, according to PFS, service agreements, which must be signed by PFS members as well, will provide assurance of continued payment by requiring customers to provide annual financial information, meet creditworthiness requirements, and provide additional financial assurances (e.g., advance payments, irrevocable letters of credit, third party guarantees, or payment and performance bonds) as needed. *See id.* at 1-6 to -7 (rev. 0 July 1997 & rev. 4 Aug. 1999).

LBP-00-6, 51 NRC at 104-06.

funding would be based on **x x x x x x x x x x x x x x x x x x x x x** in an amount set at the greater of (a) **x x x** per kgU multiplied by the number of kgU to be stored at the facility, or (b) **x x x x x x x x** multiplied by the number of canisters (assuming 10,000 kgU per canister). **x x,** resulting in a passthrough to customers of those costs. *See* MSA Pleading at 4-5.

2. In contrast to its previous indication that storage canister and cask payments to vendors would be made from the lump-sum second base payment funds, with any cost increases passed through to the customers, under the proffered MSA (section 13.3) canister and storage cask vendor payments will be the responsibility of the customers, who will also be the owners of the canisters and casks. **x x.** *See id.* at 5-6.

3. The MSA (section 13.4) would provide for PFS customer annual payments to cover actual operational and maintenance costs, with each customer being responsible for its proportional share of those costs, which include but are not limited to **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x,** a fixed equity return, and a return on investment. These payments would be due quarterly prior to the beginning of each quarter based on a PFS yearly operational costs estimate with the possibility of an additional payment or credit being assessed to cover a proportional share of any annual operation costs that exceed or fall short of estimated costs **x x.** *See id.* at 6-7.

4. Decommissioning costs would be borne by customers proportionally under the MSA (section 13.5.1) in that 60 days prior to shipping its first cask during any delivery year, a customer would be required to pay its allocated portion (on a per-canister basis) of the PFS facility's estimated radiological and nonradiological decommissioning costs (including spent fuel cask decommissioning) associated with each canister being shipped that year. The cost estimate is subject to annual adjustment based on inflation and other factors and the customer must pay the allocated portion of any increase within 30 days of receiving a PFS invoice. *See id.* at 8.

5. **x x.** *See id.* at 8-9.

6. **x x.** *See id.* at 9.

7. Although the MSA provides that the customer is the shipper of the spent fuel transported to the PFS facility (section 7), PFS can arrange for all rail transport to the Skull Valley facility, **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x,** including those incurred for security and PFS operation and maintenance of (a) rail equipment and the Low Corridor rail line, and (b) ITP operation and maintenance and ITP transportation. *See id.* at 10-11.

8. In connection with PFS commitments relating to the PFS summary disposition motion and the Board and Commission decisions regarding that motion, the MSA incorporates provisions that (a) specify PFS cannot take any voluntary action to terminate its existence during the MSA term, which must continue until such time as PFS has completed its licensing and regulatory obligations nor can PFS or the customer terminate the agreement after the facility begins operation prior to the end of the MSA term (sections 23 and 24.3); (b) require title to the spent nuclear fuel remains at all times with the owner/customer (section 11.1), which must remove all the fuel at the end of the MSA term at its expense (section 24.4); (c) allocate legal responsibility between PFS and the customer for maintaining nuclear and nonnuclear insurance (section 17) and establish warranty and liability limitations, including limitations on liquidated damages (section 20); and (d) seek to ensure customer creditworthiness by providing for periodic

customer financial submissions and an annual PFS customer assessment as well as additional measures, such as customer letters of credit and third-party guarantees, that PFS can invoke if additional financial assurance is necessary. *See id.* at 12-14.

In response to this PFS submission, by orders dated October 5 and 6, 2000, the Board set a schedule under which (1) PFS was to provide a listing and description of any additional MSA provisions that embodied variations or changes from representations previously made to the Board about the service agreement in its dispositive motion or evidentiary presentations; (2) late-filed contentions or other submissions addressing the impact of MSA-related variations/changes upon prior Board summary disposition rulings or the evidentiary record of the June 2000 hearings were to be submitted; and (3) a PFS dispositive motion relative to the MSA was to be filed. *See* Licensing Board Order (Revising Scheduling Order and Granting Motion To Withdraw) (Oct. 6, 2000) at 1 (unpublished); Licensing Board Order (Scheduling Matters) (Oct. 5, 2000) at 1-2 (unpublished). Responding to that order, on October 17, 2000, PFS provided a listing of other changes or variations from previous representations, *see* [PFS] Identification of Additional MSA Provisions That Embody Changes from Previous Representations (Oct. 17, 2000) [hereinafter MSA Additional Provisions], which included:

1. Although the December 2000 PFS summary disposition filing indicated that (except to the extent debt financing was used) under the then-contemplated customer payment structure for a **x x x x x x** MTU facility, prior to spent fuel shipment it would receive **x x x x x x x x x x x x** out of a total of **x x x x x x x x x x x x** for its services over the 20-year license term, **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x,** the percentage of funds it would receive up front would be ‘‘somewhat less.’’[4] *Id.* at 4.

2. In contrast to previous PFS statements that it would own the storage casks, the MSA (section 13.3) provides that the customer owns both the canister and the storage cask. *Id.* at 5.

3. Although PFS member investment, with interest, will still be paid only after PFS O&M costs are covered, under the shift to a cost-plus format, the MSA (section 13.4) provides for a return on investment (i.e., a return to members making initial project phase equity contributions) as well as a return of investment

[4] In making this representation, PFS noted that under the MSA it would receive full payment for canisters and storage casks, radiological and nonradiological decontamination funding, and transportation costs prior to receipt of spent fuel at the facility, costs that would constitute approximately **x x** percent of the estimated **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** O&M costs of the facility. Additionally, PFS declared that, unlike under the previously envisioned service agreement terms, it would receive O&M cost payments prior to receipt of customer spent fuel and that the MSA permitted it to reject a customer’s spent fuel shipment if it has not made its MSA-required payments. *See* MSA Additional Provisions at 4 n.6.

(i.e., the repayment of members' initial project phase equity contributions) for members. *See id.*

4. Although PFS made evidentiary hearing representations that the first base payment for construction would be subject to an escalation factor up to the time the payment was made, because under the MSA that amount is replaced by **x x x x x x x x x x x x x x x x x x x x x x x** that is set at an amount expected to more than account for anticipated escalation through the start of construction, the MSA does not provide for escalation of the **x x x x** amount. The same is true relative to the annual storage fee O&M escalation provisions of the previously described agreement given that customers are now responsible for paying actual O&M costs. *See id.* at 5 & n.11.

5. In connection with transportation costs, although PFS previously stated that if costs for a given shipment were less than provided for in the third base payment allowance (i.e., **x x x x x** per kgU shipped) it would keep the difference, under the MSA (section 7.2.2) any difference between the customer payment made on the basis of the PFS yearly estimate of costs and the actual costs to PFS will be credited to the customer. *See id.* at 6.

6. The MSA provides for PFS payments that were not specifically culled out and identified as costs in PFS evidentiary presentations (albeit covered under a cost estimate amount for contingencies), including (a) liquidated damage payments to a customer for failure to deliver timely PFS-supplied equipment (section 5.2); (b) sums billed to PFS by a customer for decontamination of PFS-supplied equipment prior to customer acceptance and use of the equipment (section 5.3.1); (c) reimbursements to customers for expenses incurred in correcting noncontamination-related defects and deficiencies in PFS-supplied equipment identified at the time the customer receives the equipment (section 5.4.1); and (d) customer expenditures arising from the cost of shipping fuel back to the customer if the fuel is rejected on route to or after it reaches the PFS facility because of (i) a force majeure (i.e., act of God) event that renders impossible or impracticable spent fuel storage or transportation; or (ii) a legal prohibition on PFS arranging for spent fuel transportation or storage (sections 6.4.3(d) and 6.4.4). *See id.* at 7, 8.

7. The MSA also provides for revenue sources PFS previously had not identified in its summary disposition pleadings or evidentiary presentations, including (a) customer liquidated damage payments for delay in loading canisters with spent fuel or shipping casks onto transportation conveyances (section 5.4.2); (b) customer reimbursement payments for replacing damaged PFS equipment (sections 5.4.2 and 5.4.3); and (c) a per customer **x x x x x x x x** service agreement execution fee. *See id.* at 7 n.14.

In addition, PFS brought three MSA-related matters to the Board's attention: (1) although the facility would, as represented in the MSA provided to the Board in September 2000, be built in three phases, in contrast to the MSA declaration

that each stage would have a 10,000 MTU capacity, the third phase would have a 20,000 MTU capacity, for a total capacity of 40,000 MTU; (2) the dollar amount for the upfront radiological and nonradiological decommissioning payment would be $40,000 per canister (in 1997 dollars), adjusted annually for inflation and any estimated decommissioning cost increases per MSA section 13.5.1; and (3) an additional provision will be added to the MSA providing, as per PFS evidentiary representations, that the fees for non-PFS members are set at a higher level than those charged to PFS members. *See id.* at 8.

C. State Filing Responding to the PFS MSA/State Motion To Reopen/PFS and Staff Responsive Filings

1. State Response to PFS MSA

On November 7, 2000, the State filed two pleadings relative to the PFS MSA. In the first, asserting that the MSA did not satisfy the Commission's remand or demonstrate PFS was financially qualified under 10 C.F.R. Part 72, the State outlined its objections to the MSA as including the following:

a. PFS has not demonstrated the inviolability of the MSA as required by the Commission in CLI-00-13, which requires that key provisions of the final version of the agreement be incorporated into the PFS license if PFS intends that it be utilized to establish its financial qualifications for a 10 C.F.R. Part 72 license. *See* [State] Objections to the Adequacy of the [PFS MSA] To Meet Part 72 Financial Assurance Requirements (Nov. 7, 2000) at 5-7 [hereinafter State MSA Objections].

b. The MSA contains representations that are different from, or contradictory to, those made before the Staff, the Board, and the Commission during the previous ruling on the PFS dispositive motion, including a significant reduction in its pre-spent fuel receipt funds in hand, a lack of significant cash reserves or liquid assets relative to its potential liabilities, so that the summary disposition record must be vacated. *See id.* at 7-12.

c. The MSA terms are complex and ambiguous, particularly the concepts of ''aggregate usage'' and ''term.'' Additionally, **x x**

x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** and its overall financial design affords the Staff too much discretion, calls upon the Staff to make overly complex judgments, and requires continuous Staff monitoring of PFS. *See id.* at 12-23.

d. The PFS business model, which creates a shell that hides the entities that truly control the spent fuel at the Skull Valley facility, i.e., its member-customers, establishes a principal-agent relationship between PFS and its member-customers that requires the PFS member utilities to be named as co-applicants for the facility's Part 72 license. *See id.* at 23-25.

2. State Motion To Reopen

Additionally, on that same date the State filed a motion to reopen the record of the June 2000 evidentiary hearing regarding contention Utah E, subparts 5, 6, and 10, in light of the MSA. *See* [State] Motion To Re-open the Hearing Record on Contention Utah E (Nov. 7, 2000) [hereinafter State Reopening Motion]. According to the State, such a reopening is necessary because, as proffered by PFS in response to the Commission's remand to the Board, the MSA is inconsistent with the PFS testimony at the hearing as it relates to (1) debt financing of construction and equipment, particularly with regard to debt repayment and interest costs and the uncertainty created relative to the size of the loan amounts available under the MSA loan limit of **x x x**/kgU; (2) operating capital sufficiency, including cost estimation procedures and how PFS will utilize the **x x x x x x x x** commitment fee; (3) adequacy of the PFS contingencies cost estimate to cover liquidated damage and force majeure costs; (4) newly identified equity and investment return costs estimates; (5) apparent exclusion of dry transfer system costs; and (6) adequacy of nuclear property insurance, both as to amount and the liability assignment/apportionment ''labyrinth'' it creates. *Id.* at 5-18. Citing a Licensing Board decision in *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), LBP-84-10, 19 NRC 509, 530 (1984), in asserting that a less stringent reopening standard is warranted in view of its expense and resource commitment at the hearing and the ''eleventh hour'' PFS change in its financial assurance demonstration, the State also declared that it meets the 10 C.F.R. § 2.734 standards for reopening the record. *Id.* at 18-20. According to the State, its motion is timely in accordance with the Board's October 5 and 6 scheduling orders; its motion addresses a significant health and safety issue relative to the possibility under the MSA of significant PFS undercapitalization and a thin revenue stream that could result in ''cutting corners'' on safety; further consideration of the MSA could result in a materially different result relative to the evidentiary hearing that was held as to the various matters outlined above; and its motion is supported by a knowledgeable individual, Dr. Michael F. Sheehan,

who presented testimony on behalf of the State during the June 2000 hearings. *See id.* at 20-23. Additionally, the State declared that the PFS proffer of its MSA with different representations than were made earlier entitles it to discovery. *See id.* at 23-24.

3. PFS/Staff Responses to State Motion To Reopen

On November 21, 2000, both PFS and the Staff filed responses opposing the State's reopening motion. *See* [PFS] Response to [State] Motion To Re-open the Hearing Record for Contention Utah E (Nov. 21, 2000) [hereinafter PFS Reopening Response]; NRC Staff's Response to ''[State] Motion To Re-open the Hearing Record on Contention Utah E'' (Nov. 21, 2000) [hereinafter Staff Reopening Response]. According to PFS, the scope of the June 2000 hearings on contention Utah E was limited to the issues of the adequacy of PFS construction and operating cost estimates and onsite property insurance coverage. PFS also declared that any prefiled testimony and discussion at the hearing regarding PFS service agreements was in the context of issues relating to cost escalation or the passthrough of costs or cost increases to PFS customers, which it asserts was generally true for Dr. Sheehan as well. As such, according to PFS, except for these limited cost issues, its assertions provide no basis for reopening the record. Moreover, as to those noncost issues, PFS likewise declared reopening is inappropriate as these issues clearly would not have the requisite materiality effect on the outcome of the hearing. *See* PFS Reopening Response at 9-10, 24.

Specifically in this regard, on the matter of the use of debt financing for construction and equipment costs, citing the Commission's decision in *Northern States Power Co.* (Monticello Nuclear Generating Plant; Prairie Island Nuclear Generating Plant, Units 1 and 2; Prairie Island Independent Spent Fuel Storage Installation), CLI-00-14, 52 NRC 37, 49-50 (2000), PFS declared that the Commission has sanctioned the type of cost passthrough provision it envisions in the MSA. Further, according to PFS, the State's concern about the adequacy of the loan amount if construction is delayed is being addressed in a new MSA provision that the **x x x/**kgU amount for Phase I may be escalated by the industry sector-specific indices described in PFS construction cost testimony at the hearing as being applicable to the first base payment under its former funding approach, which the State did not challenge, and by the fact that, even if later phase construction costs escalate beyond what can be covered by these escalators, under the first license condition imposed by the Commission, it cannot start Phase II and Phase III construction unless PFS obtains adequate funding. *See* PFS Reopening Response at 11-17. As to the issues regarding adequacy of operating capital, PFS maintained that the State's asserted MSA-related concerns about the adequacy of PFS O&M cost estimates are wholly speculative in light of the PFS cost estimate showing at the June 2000 evidentiary hearing and the MSA provision that allows

PFS to recoup any costs that it accrues beyond the annual estimates that form the basis for customer **x x x x x x x x x** O&M payments. *See id.* at 17-18.

Also unwarranted, PFS declared, are State reopening concerns about liquidated damage and force majeure costs for, even putting aside that they would be covered under its contingencies estimate amount, **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x.** The same is true for the return of equity and return on investment cost concerns posed by the State, according to PFS. *See id.* at 18-20. As to the dry cask system cost, although PFS declared it is covered under the MSA provision (section 1) regarding ''Ancillary Equipment,'' it further stated that it will modify the MSA definition of ''Transfer Cask'' to include dry transfer casks. *See id.* at 20. Relative to the State's nuclear property insurance concerns, PFS observed that an MSA provision (section 17.1.2(b)) stated that it will obtain onsite insurance ''in such other amount as may be required by the NRC,'' which in accordance with the Commission's CLI-00-13 license condition regarding onsite liability insurance and the Board's hearing determination would require it to obtain funding in the amount the State asserts. Moreover, PFS declared that the State's claims about a liability distribution ''labyrinth'' are without basis, as is apparent under the terms of the MSA, which were intended to be consistent with the standard Price-Anderson Act scheme for allocating liability. *See id.* at 21-23. Finally, PFS declared that, notwithstanding the State's contrary claims, the Board lacks jurisdiction to vacate its earlier summary disposition record, but must make any additional rulings regarding contention Utah E within the context of that ruling, as it was affirmed and reversed by the Commission, and the evidentiary record that has been created in the June 2000 hearing. *See id.* at 24.

For its part, in responding to the State's reopening motion the Staff asserted that the State's request for a more lenient reopening standard under the *Comanche Peak* decision misapplies this decision that, among other things, recognized that an applicant's request to reopen a record was not the same as an intervenor's given the procedural advantages afforded the latter to compensate for application of a higher reopening standard. *See* Staff Reopening Response at 6-7. Further, in assessing the section 2.734 standards, although agreeing that the State's request is timely, the Staff declared that its submission lacked a showing of the requisite safety significance, being based only on unfounded conjecture that PFS will ''cut corners.'' *See id.* at 8-9. Morever, the Staff declared that the State had failed to demonstrate that its particular MSA-related concerns would lead to a materially different result given that none of the matters were relevant to or probative of the construction/operation cost estimate and onsite nuclear insurance issues that were the subjects of the evidentiary proceeding. *See id.* at 9-10.

In this regard, the Staff likewise addressed the specifics of each of the State's MSA-related concerns. On the use of debt financing for construction and equipment costs, the Staff declared that having established the validity of its cost

estimates in the evidentiary hearing, it is apparent that the PFS approach **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** and the cost-plus basis upon which customers now are obligated to provide PFS with revenues to repay loan principal and interest, as well as any other operating cost increases over estimates, provide reasonable assurance that sufficient funds are available such that no issue exists that requires record reopening. The same is true relative to State concerns about the size of the case/canister manufacturing facility relative to early spent fuel capacity declarations in the service agreements. Regarding the State's arguments concerning the fixed amount of construction and equipment cost funding, the Staff asserted that the **x x x**/kgU figure is adequate in that it would make available **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** to cover an estimated **x x x x x x x x x x x x** in facility costs (in 1999 dollars), which includes a 10% contingency factor. Nor is the State correct, the Staff asserted, in declaring that the Commission-approved license condition requiring PFS to show it has adequate funding before beginning construction is flawed because it permits approval of the entire 40,000 MTU capacity based on **x x x x x x** amount fixed in year 2000 dollars, which may not provide sufficient future funding. According to the Staff, PFS construction costs estimates must include an escalation factor that makes this concern irrelevant. Also irrelevant, the Staff declares, are the State's concerns that **x x,** given the MSA provision (section 13.4) that requires customers to pay a proportional share of all PFS costs. Finally, the State claim that PFS will be precluded from having a satisfactory credit rating because it is **x x x x x x x x x x x x x x x x x x x x x x x x x x** provides no basis for reopening, according to the Staff, in light of the fact that **x x.** *See* Staff Reopening Response at 12-17.

In connection with the State's concerns about insufficient operating capital, like PFS, the Staff noted the MSA requirement (section 13.4) that costs of service be paid by customers ''without limitation.'' So too, the Staff found immaterial as a ground for reopening the State's assertion that there is no basis for PFS costs of service estimates, given that this billing estimate is distinct from the long-range cost estimates that were at issue under contention Utah E, and its concern that the **x x x x x x x x** commitment fee need not be credited against a customer's other costs, given that customers must pay their share of the costs in full, regardless of the refundability status of the commitment fee. Further, although the State contended that reopening is necessary to permit consideration of the cost of a force majeure event and liquidated damages resulting from events such as a PFS

failure to deliver cask loading equipment on time, according to the Staff, it has failed to demonstrate this item would compel a materially different result in light of the PFS cost estimate for contingencies or that cost recovery from customers for these items is unavailable, if they were ever incurred. And relative to the State's arguments regarding the MSA provisions (section 13.4.1; Schedule 4) providing for a return of equity and a return on investment, the Staff claimed no showing of a materially different result had been made because the MSA does not change the approach outlined at the June 2000 evidentiary hearing whereby PFS would recover these items only after O&M costs were covered and, in any event, its customers are required to pay a proportional share of all costs, including any increase in actual costs above estimated costs. Relative to the State's assertion about the failure to include dry transfer system costs, according to the Staff this likewise lacks the requisite materiality because the cost estimates already provided cover this item, which (like any number of other costs) is not required to be culled out specifically in the MSA. The Staff concluded by declaring that the State concerns about insurance coverage also fail to establish there would be a materially different result on reopening, given that the MSA does not alter the insurance commitment made by Mr. Parkyn during the evidentiary hearing, or the cost of that insurance. The same was true for the State's assertion about the purported liability ''labyrinth'' created under the MSA, and its question about the availability of coverage in the face of legal action following an incident is the type of conjecture that is wholly insufficient to support reopening and, indeed, is wholly outside the scope of contention Utah E, which concerned the amount of nuclear insurance rather than disputes regarding claim coverage. *See* Staff Reopening Response at 17-24.

D. PFS Summary Disposition Motion/State and Staff Responsive Filings/State Reply Pleading

1. PFS Dispositive Motion

On December 4, 2000, PFS submitted a response to the State's November 7, 2000 objections to the adequacy of its MSA and request for summary disposition relative to the contention Utah E matters remanded by the Commission in CLI-00-13 for further Board consideration, which it supported with a statement that sets forth twenty-one material facts not in dispute that PFS asserts entitle it to a merits ruling in its favor. *See* [PFS] Motion for Summary Disposition on Issues Remanded by CLI-00-13 on Utah Contention E and Confederated Tribes Contention F and Response to [State] Objections to the Adequacy of [PFS MSA] To Meet Part 72 Financial Assurance Requirements (Dec. 4, 2000) [hereinafter PFS Dispositive Motion]. As was the case with its earlier dispositive motion regarding contention Utah E, in support of this motion PFS provided the sworn

statement of its Chairman, John Parkyn, to which are attached a revised MSA as well as a line-in/line-out version of the MSA that shows specific differences between the revised MSA and the MSA version submitted on September 29, 2000. *See id.* Declaration of John Parkyn (Dec. 4, 2000) [hereinafter Parkyn Declaration]; *id.,* Parkyn Declaration Exh. 1 (Model Agreement for Storage of Spent Nuclear Fuel by and Between [PFS] and ____ (Dec. 4, 2002)); *id.,* Parkyn Declaration Exh. 2 (line-in/line-out version of December 4, 2000 revised MSA).[5] According to PFS, the revised MSA contains changes committed to by PFS in its November 21 reopening motion response, as well as editorial and related changes, clarifications and corrections, and additional terms and conditions, none of which have any substantive effect on the MSA's financial assurance provisions as submitted in September 2000. *See* PFS Dispositive Motion at 3-4.

a. MSA Meets All Financial License Conditions

In its pleading, PFS first asserts that its revised MSA meets the license conditions mandated by CLI-00-13, *see supra* pp. 192-93. In connection with LC-1, which requires fully committed funding (equity, revenue, and debt) adequate to construct before any phase of construction is begun, PFS asserted that committed funding is not limited to customer service agreements. Although the MSA (section 13.2) does provide for **x x x x x x x x x x x x x x** sufficient to cover PFS estimated construction costs, contrary to State arguments, it can rely on other committed financing forms besides the **x x x x x x x x x x x x x x** described in the MSA. Relative to LC-2, which mandates that PFS have in place long-term service agreements with prices sufficient to cover its Skull Valley facility's O&M and decommissioning costs for the entire license term, PFS asserted that it fulfills this condition through MSA terms that (1) make customers directly responsible for canister and storage cask vendor payments and other payments (section 13.3); (2) provide for annual payments by PFS customers to cover all PFS costs in performing services and in operating and maintaining the facility, including but not limited to those identified in the MSA (Schedule 4), and otherwise meeting its obligations (section 13.4.1); **x x**

[5] Unless otherwise noted, references in this decision to particular provisions of the MSA are to the version included as Exhibit 1 to the Parkyn Declaration submitted in support of the December 4, 2000 PFS dispositive motion.

x x x x x x x x x x x x x x x x x x x x x x x. According to PFS, notwithstanding the State's arguments that this arrangement is inadequate because PFS will have no assets, it is in fact sufficient to establish the requisite reasonable assurance in that LC-2 only requires the agreements to have ''prices sufficient to cover'' costs, not cash or other assets in hand, which is consistent with the recent Commission *Monticello* precedent, and PFS will hold significant assets, such as its license and spent fuel storage contracts. *See* PFS Dispositive Motion at 4-5.

So too, PFS declared its MSA fulfills the other pertinent Commission-mandated license conditions. In connection with LC-5, under which PFS is not permitted to terminate its license before it has provided all agreed spent fuel storage services under its service agreements and completed its licensing and regulatory obligations, PFS maintained that it has fulfilled this condition through MSA terms that (1) declare PFS shall not take any voluntary action to terminate its existence during the service agreement term (section 24.3.4); (2) provide that the service agreement term shall continue until such time as PFS has completed its licensing or regulatory obligations under the license and the license is revoked or terminated (section 23); and (3) preclude either PFS or its customers from terminating the agreement from the beginning of facility operation through the end of the service agreement term (section 24.3.1). *See id.* at 6.

Regarding LC-3, which directs PFS to incorporate service agreement provisions that assign legal and financial responsibility between PFS and its customers, including an acknowledgment that each customer retains title to its spent fuel throughout the storage period, this condition is fulfilled, PFS argued, given MSA provisions that (1) provide that the title to spent fuel remains with the customer at all times (section 11.1); (2) provide the customer is responsible at all times for cleanup costs of any contamination it causes (section 13.6); (3) make the spent fuel customer or owner responsible for removing all its fuel from the site at the end of the service agreement term at its sole cost and expense (section 24.4); (4) define the responsibilities of the service agreement parties to maintain nuclear and nonnuclear-related insurance (section 17); (5) identify PFS warranty and liability limitations (section 20); (6) provide that PFS liability for all claims arising under the MSA (other than liquidated damage claims as defined under MSA section 5.2) is not to exceed the amount PFS obtains under insurance policies for such claims (section 20.3). According to PFS, as it noted in its response to the State's reopening motion, the State's claim of a liability labyrinth is based on its misunderstanding of the terms and interrelationships between the various nuclear insurance policies. *See id.* at 6-7.

Finally, in connection with LC-4, which requires PFS to include service agreement provisions requiring customers periodically to provide credit information, and, where necessary, additional financial assurances such as guarantees, prepayment, or payment bond, PFS declared that MSA section 15, along with the schedules and exhibits it references, fulfills this requirement in that (1) customers

are to provide annually specified financing information, including Securities and Exchange Commission (SEC) filings and independently audited financial statements (Schedule 3); (2) customers may be required to provide further financial assurances if (i) PFS evaluation of the submitted information indicates the customer's financial condition is unsatisfactory or presents a credible risk of not being able to meet its PFS financial obligations, (ii) PFS has not received the information it needs to make its evaluation, or (iii) the customer meets any of the conditions in MSA section 15.2.1(c);[6] (3) a customer required to provide further assurance can do so by (i) making an advanced payment specified by PFS; (ii) having a standby irrevocable letter of credit, (iii) obtaining a third-party guarantee of the customer's payment and performance obligations by an entity acceptable to PFS, and (iv) getting a payment and performance bond from an entity acceptable to PFS; and (4) unless PFS specifies another amount, the amount of the customer assurance must be equal to the customer's total obligations to PFS, including any amount necessary to remove the customer's fuel from the PFS facility. *See id.* at 7-8.

b. PFS Response to State's MSA Objections

After detailing how the MSA fulfills the license conditions imposed by the Commission, in its pleading PFS goes on to address the four general objections to the MSA proffered by the State in its November 7 filing. On the first matter — the purported lack of MSA ''inviolability'' and the need to incorporate the MSA into a license condition — PFS asserted that the Commission's use of that term in CLI-00-13 was intended to denote a concern that an MSA not have loopholes that would allow PFS or its customers to avoid or break PFS commitments, such as permitting customers to avoid payments while leaving the fuel with PFS or PFS to voluntarily dissolve and leave the facility without an owner/operator. According to PFS, the State has not argued that such loopholes exist in the MSA. Moreover, PFS contended that the use of the term ''inviolate'' was not intended to require MSA incorporation into the license. Instead, the MSA is intended to provide guidelines that are sufficient to allow the Staff to ensure during the conduct of its

[6] MSA section 15.2.1(c) indicates those conditions include (i) material adverse change in financial condition since entering into the service agreement; (ii) 30 days have elapsed since a failure to pay or perform a material obligation or a default under an agreement or document that evidences a customer indebtedness of more than 10 million dollars; (iii) a customer having suspended or discontinued its business, generally failed to pay debts, filed for bankruptcy, applied for custodian appointment for its assets or property, become insolvent or subject to liquidation or debt reduction; (iv) customer transfer of a substantial portion of its assets to another person; (v) customer transfer or assignment to another person of its rights and obligations under the service agreement; (vi) failure to make any of the fee, loan, vendor or other payment due under sections 13 and 14 of the service agreement; and (vii) loss of customer authorization to possess spent fuel. *See* Parkyn Declaration, Exh. 1, at 38.

verification review that the actual contracts meet the Commission's expectations as reflected in the license, similar to the model documents provided in Regulatory Guide 3.66 relative to the adequacy of material licensee bonds or letters of credit. Further, PFS asserted that State concerns that absent incorporation into the license, MSA terms will be only illustrative and subject to PFS revision at will fails to recognize the Commission's own statement that actual customer contracts did not have to ''slavishly'' follow the MSA and the fact that PFS changes would be subject to Staff review. *See id.* at 8-11.

Relative to the second item — the need to vacate the Board's prior summary disposition holdings in light of the new MSA provisions — addressing first the purported legal deficiencies in the State's claim, PFS asserted that the matters before the Board on remand, as defined by the Commission in CLI-00-13, are whether the MSA meets (1) the financial assurance license conditions imposed, and (2) the concerns raised in contention Utah E. In this light, the mere fact there were changes to the MSA is irrelevant; instead, the focus must now be on whether there is any material factual dispute on whether the MSA, as revised, fails to satisfy either the license conditions or the concerns raised in connection with contention Utah E. PFS also declared that the State's argument in this regard is legally flawed as it attempts to read into CLI-00-13 a Commission intent to require that PFS must have an unspecified amount of cash on hand prior to beginning facility construction or operation. According to PFS, all that is required under LC-1 and LC-2 is that PFS have funding fully ''committed'' prior to construction and that its ''prices'' are sufficient to cover facility O&M and decommissioning costs, which are consistent with the Commission's earlier determination. *See GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193 (2000). Finally, PFS asserted that as a legal matter, any contention Utah E issues that do not involve the PFS service agreements are outside the scope of the Commission's remand and thus not subject to further litigation. *See id.* at 11-12.

Also with regard to the second item, PFS asserted that the State's request to vacate the entire summary disposition record for contention Utah E likewise has faulty factual underpinnings. First among these is the State's concern that previously PFS had committed to having **x x x x x x x x x x x x** out of a total of **x x x x x x x x x x x x** on hand prior to receiving any spent nuclear fuel, but will now have only **x x x x x x x x** plus any contractual commitments and loans. In fact, under its previously outlined plan and as was testified to by Mr. Parkyn at the June 2000 evidentiary hearing, PFS would only have had in hand the first of the three base payments, amounting to **x x x**/kgU for the 10,000 metric tons involved (**x x x x x x x x x x x x**), while the second and third base payments, amounting to **x x x**/kgU, would have come only prior to receipt of the specific canisters. PFS also pointed out that this assertion is inconsistent with arguments made by the State about the lack of an adequate PFS revenue stream in its proposed findings

relating to the contention Utah E issues heard in June 2000. Yet most important, according to PFS, is the fact this argument fails to show that under the MSA, PFS costs will not be covered, given the legal obligation created by the MSA for customers to make regular, **x x x x x x x x x** payments to cover all PFS estimated costs, **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x,** and to pay actual costs accrued beyond those estimates **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x.** *See id.* at 12-16.

In connection with the third item — claims about the inadequacy of MSA terms and provisions — PFS noted first that although the State claims the MSA is ''ambiguous,'' as to those terms about which the State raises a specific claim, the Commission's financial assurance requirements are met. Also unavailing, PFS maintained, is the State's challenge to the purportedly ''complex'' MSA because it relies solely on customer revenue and it requires the Staff to engage in the type of post-review analysis that the Commission warned against in CLI-00-13. According to PFS, its reliance on revenue is not inconsistent with the Commission's finding of reasonable financial assurance relative to the reactor licensee in the *Oyster Creek* decision, and the State's claim about the complexity of Staff review is entirely unsupported. *See id.* at 16-17.

Relative to the specific matters that the State declares ambiguous, although labeling meritless the State's claims about the terms ''calculated based upon'' and ''term'' as they are used to determine ''aggregate usage'' in MSA section 13.4.2 to calculate a customer's proportionate share of the PFS costs of service, **x x.** As now revised, **x x,** with the time a customer stores its fuel not being a computation factor. Another supposed uncertainty relating to the potential for customers to have to pay PFS after the customer's fuel has left the Skull Valley facility or after the customer has left the nuclear industry is also without substance, PFS maintained. As to the latter situation, PFS pointed to MSA section 15.2.1, which makes customers that experience a material adverse change or are no longer authorized to possess spent nuclear fuel subject to MSA section 15.2.2 that requires such customers to provide additional assurance of their ability to cover their obligations. Further, with regard to the customer that is obligated to pay after its fuel has left the facility, PFS asserted that the State has

provided nothing other than speculation to support its premise that such an entity still in the nuclear business that otherwise did not trigger MSA section 15.2.1 would pose a default risk. *See id.* at 17-18.

Also claimed by the State to be inadequate, PFS noted, are **x x.** Also groundless, according to PFS, is the State's claim that construction delay could cause costs to escalate beyond the MSA-provided **x x x x x x x x x x x x x x x x x x x**/kgU so as to cause PFS to cut corners, given the PFS Phase I cost estimate is **x x x x x x x x x x x x x x x x x x x** less than the amount it will have available for construction and the PFS determination to place a **x x x x x x x x x x x x** escalator into the MSA. *See id.* at 18-19.

Another series of State-identified inadequacies PFS sought to address are those relating to customer responsibility for repaying PFS indebtedness. The State's concern that the PFS cost recovery scheme presumes a 40-year term is baseless, according to PFS, because it is a plausible assumption that PFS at the end of its initial 20-year term will be able to obtain a renewed license. Also without merit, PFS maintained, is the State's claim that linking a **x x x x x x x x x x x x x x x x x x x x x x x x x x x** to its fuel delivery years builds in a normal operations revenue stream deficiency. Although asserting that the last sentence of MSA section 13.5.2 originally submitted to the Board would address this problem by covering any **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** deficiency, PFS nonetheless indicated that it had revised that section to address this concern. Under this revision, regardless of PFS customer fuel delivery schedules, **x x.** Further, PFS declared that a State concern that MSA section 13.5.2 is deficient because it does not consider the apportionment of costs when construction costs are not fixed at **x x x x x x x x x x x x** and does not allow

a revenue shortfall determination is meritless because MSA section 13.2 covers PFS indebtedness, whatever it comes out as and without regard to the **x x x x x x x x x x x x** amount. *See id.* at 19-20.

State claims regarding PFS customer creditworthiness also were rejected by PFS as being without substance. Relative to the State's argument that PFS does not know its costs and the MSA lacks a term, PFS relied upon its evidentiary showing during the June 2000 evidentiary hearing and declared that the MSA customer storage schedule (MSA Exhibit A-1) does not allow a customer to store beyond two consecutive 20-year license terms. Insubstantial as well, PFS declared, is the State's assertion that over time as customers decommission their facilities, sending the fuel back as a remedy for lack of payment or other defaults will become increasingly ineffective in light of MSA sections 15.2.1 and 15.2.2 that allow PFS to seek further assurance in the event of a customer's business changes or it relinquishes its fuel possession license. Also lacking sufficiency, according to PFS, is the State's claim that the MSA is deficient in that PFS customers will be entities of various types, some without adequate assets of their own. This State argument, PFS asserted, does not recognize the MSA provisions (sections 15.1 and 15.2; Schedule 3) that allow PFS to evaluate the financial health of a potential customer before fuel delivery to ensure they can manage their financial obligations and provide the ability to impose further financial assurance requirements. Nor, for the same reason, did PFS find merit in the State's concerns about the ability of PFS to identify customers that are in failing financial health or to return spent fuel to a customer that becomes insolvent, particularly in light of the Commission's indication in CLI-00-13 that even a not insignificant possibility that financial assurance-related assumptions and forecasts will turn out unfavorably is not sufficient to negate a reasonable assurance finding. Finally, PFS again relied upon the Commission's *Oyster Creek* precedent regarding the use of operating revenues for a financial assurance finding as demonstrating the inadequacy of the State's assertion that the MSA is deficient because it allows PFS to operate on a ''just-in-time'' cost recovery basis with respect to its revenues. *See id.* at 20-22.

The last State-identified MSA deficiency addressed by PFS in its motion is the purported improper latitude the MSA affords the Staff in the course of its post-licensing financial assurance review. This is clearly nothing more than speculation, according to PFS, given the clearly defined scope of the PFS project, its schedule, and its construction and O&M costs; its nonspeculative revenue stream as required by the license conditions affirmed by the Commission in CLI-00-13; its perfectly legal reliance upon operating revenues, guaranteed under contract, to provide assurance costs will be covered; and the established presumption that the Staff will not permit a material change in the MSA in contravention of any Board decisions or Commission directives. *See id.* at 22-23.

c. PFS Members as Licensees

As a final matter, PFS sought to deal with the State's legal claim that PFS members are really de facto owners of the Skull Valley facility and, as such, must be named as licensees. Besides asserting this claim should be struck as beyond the scope of contention Utah E, PFS declared it is clear that a limited liability entity like PFS can be the sole licensee of an NRC-licensed facility. According to PFS, this is true even when the limited liability entity is wholly owned by a parent corporation and the parent is providing a financial guarantee to support the financial qualifications of the limited liability entity, nor do the agency cases cited by the State in support of its argument sustain a contrary conclusion. PFS concluded that because the PFS members will have neither ownership interest in nor operating authority over the PFS facility, they are not licensees. *See id.* at 23-25.

2. State Dispositive Motion Response

In its December 22, 2000 response to this PFS dispositive motion, the State argued that a ruling in favor of PFS would be totally inappropriate, a position it supported with a statement that outlined thirty-eight relevant, material facts in dispute. *See* [State] Response to [PFS] Motion for Summary Disposition on Issues Remanded by CLI-00-13 on Utah Contention E/Confederated Tribes Contention F (Dec. 22, 2000) [hereinafter State Dispositive Motion Response]. And, as was the case regarding the initial PFS summary disposition motion, in support for its response, the State provided the affidavit of Dr. Michael F. Sheehan. *See id.* Declaration of Michael F. Sheehan, Ph.D. (Dec. 22, 2000) [hereinafter Sheehan Declaration].

The State first declared that the substantive terms and conditions of the PFS service agreement must be made a license condition because, as the recent material changes in the PFS scheme for funding construction and O&M costs illustrate, it is an evolving document that contains the type of ambiguity the Commission eschewed in CLI-00-13. *See id.* at 7-9. Further, the State asserts that the MSA does not provide the requisite reasonable assurance in the following ways:

a. Cash Reserves

PFS assertions that it has no obligation to maintain any significant level of reserves, including cash reserves, demonstrate clearly, the State maintained, that it lacks the requisite financial qualifications. According to the State, reserves are a mainstay of a prudent business operation. Without such reserves, the State contends PFS reliance on customer billing and the ''price'' it has set for its services is not adequate, particularly given the volatile power market and the near

bankrupt status of some major utilities. Indeed, according to the State, even if all PFS customers paid their storage fees on time, PFS may have a deficiency that would not allow it to safely run the facility and its thin capitalization and nondiversified, single business line will preclude access to ready credit, all of which support a determination that PFS has failed to establish it is financially qualified. *See id.* at 11-12.

b. Change from ''Aggregate Usage'' to ''Reserved Capacity''

The State also asserted that, although ostensibly to satisfy expressed State concerns, the PFS change from using ''aggregate usage'' to utilizing ''reserved capacity'' to allocate costs among its members illustrates the fundamental flaw of relying solely on contract drafting as a mechanism for establishing financial qualifications. PFS has failed to amend all MSA provisions to incorporate this change, the State declared, creating a situation in which it may not be able to **x x.** Further, according to the State, if a customer decides to withdraw some or all of its stored SNF, although the MSA provides that the customer remains obligated for its proportional share of PFS costs for the remainder of its service agreement storage schedule, this does not recognize that in adopting the ''reserved capacity'' concept the agreement decouples cost allocation from a customer's storage schedule. Because such a withdrawal does not cause a proportional reduction in the cost of service and there is no change in the aggregate reserved capacity, there is no basis in the agreement for reallocation of this abandoned cost share to other customers, leaving PFS stuck with those abandoned costs, which could be substantial if customers departed for a DOE repository or monitored retrievable storage facility. *See id.* at 12-14.

c. Construction Loans

Although noting that PFS has provided that if there is a delay in Phase I construction, an escalator (MSA Schedule 5) would become applicable to increase loan allocation of **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x**

x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x, the State considered this inadequate because (i) **x x**; and (ii) there is no escalator for Phase II and Phase III construction costs. The State asserted that a reasonable assurance finding can be made only if customers will be responsible for actual construction costs, particularly given that PFS will have a junk bond credit rating with unsecured loans and no capital or liquid assets and any promissory notes from its members or customers will not demonstrate any PFS ability actually to obtain funds in light of the current general instability in the energy market and utility operator finances. *See id.* at 14-15.

d. Adequate Operating Revenues

In connection with the PFS legal arguments that the Commission's *Oyster Creek* and *Vermont Yankee* decisions permit it to rely on operating revenues guaranteed under a customer contract in making its financial assurance showing, the State argued that these cases are inapposite because they apply to nuclear power plant operators, which have a product to sell — electricity — and an assured market or rate base to provide revenues. In contrast, the State maintained, the only PFS product is the storage of another entity's liabilities — spent nuclear fuel — and it has an assured rate base that is no better than its ability to obtain payments for fee defaults after protracted litigation. *See id.* at 15-17.

e. Cost Recovery and Customer Creditworthiness

The MSA, according to the State, is deficient in that it fails to disclose how PFS will recoup its multimillion dollar capital investment in developing and using its dry cask transfer system and contains an ambiguity regarding whether the intermodal transfer facility (ITF) or the Low rail line will be built. Further, the State asserted, the MSA provisions to address customers with financial difficulties, including advance payments, letters of credit, guarantees, and performance bonds are inadequate in that by the time PFS realizes there is a problem, it will be too late to effectively employ these mechanisms. Nor is the remedy of returning the fuel adequate. *See id.* at 17-18.

f. Other Concerns

Although PFS has indicated that cask and canister costs are now to be borne directly by PFS customers, according to the State, the MSA undermines this assertion because there are uncertainties about the relationship/contractual obli-

gations between cask/canister supplier Holtec and PFS. **x x.** Further, according to the State, the MSA assignment provision leaves open the possibility that fuel could come to PFS from another Part 72 licensee, thus creating questions about the utility's Price-Anderson Act coverage of the fuel that requires a reevaluation of the MSA insurance provision. *See id.* at 18.

Also troubling to the State is the purported degree to which the MSA will require that the Staff make the type of complex legal and discretionary judgments that the Commission purportedly eschewed in CLI-00-13. Initially, the State challenges the PFS declaration that service agreement changes would be subject to Staff review, noting that the Staff must be aware of such changes, must evaluate whether they are significant, and then determine whether they provide comparable reasonable assurance to the provisions of the MSA now before the Board. Moreover, according to the State, given the clearly evolving nature of the MSA and the fact the MSA itself contains a provision (section 13.2) that permits PFS and its customer to negotiate alternative provisions that provide comparable reasonable assurance, even if such a review were held it inevitably would require the Staff to make the types of judgments the Commission has declared inappropriate, unless a carefully crafted MSA that meets the State's concerns is included as a license condition. *See id.* at 18-20.

In conclusion, the State declared that, as these items and the lack of State discovery demonstrate, the record of this proceeding is incomplete, leaving various material factual disputes such that a Board grant of summary disposition in favor of PFS would be wholly inappropriate. *See id.* at 20-21.

3. Staff Summary Disposition Response

In its December 20, 2000 response to the PFS summary disposition motion, which was supported (as was the case with the first PFS summary disposition motion regarding financial assurance matters) by the affidavit of Financial Analyst Alex F. McKeigney and Senior Level Licensee Financial Policy Advisor Robert S. Wood, the Staff reached a different conclusion. *See* NRC Staff's Response to ''[PFS] Motion for Summary Disposition on Issues Remanded by CLI-00-13 on Utah Contention E and Confederated Tribes Contention F and Response to [State] Objections to the Adequacy of [PFS MSA] To Meet Part 72 Financial Assurance Requirements'' (Dec. 20, 2000) [hereinafter Staff Dispositive Motion Response]; *id.,* Affidavit of Alex F. McKeigney and Robert S. Wood Concerning Utah Con-

tention E (Financial Assurance) (Dec. 20, 2000) [hereinafter McKeigney/Wood Affidavit]. In this regard, the Staff began, as had PFS, by analyzing the revised MSA relative to each of the non-insurance-related license conditions outlined by the Commission in CLI-00-13.

Concerning LC-1 regarding construction funding, the Staff asserted that the combination of funding mechanisms provided by the revised MSA are consistent with that condition. The Staff pointed to the fact that, in addition to the **x x x x x x x x** nonrefundable commitment fee required of each customer shortly after service agreement execution, **x x.** Noting also that the LC-1 terms do not limit PFS to the service agreements as the only source of committed funding, the Staff concluded that the revised service agreement is consistent with that license condition. *See id.* at 6-7.

Relative to LC-2, the Staff asserted that the revised MSA fully implements this provision by indicating that a service agreement will cover the entire term of any PFS license from the date the agreement is executed to the date the PFS license is terminated or revoked, subject only to conditions pertaining to the ability of PFS to begin initial facility operation. Further evidence of compliance with LC-2 is evident, according to the Staff, by the agreement's provisions covering facility O&M and decommissioning costs that require customer payments associated with transportation, storage cask and canister vendor payments, facility operations/performance of services, customer loans, and decommissioning. *See id.* at 7-8.

LC-3, which concerns SNF ownership and liability allocation, is appropriately implemented by the revised MSA, the Staff declared, with its provisions that require customers/owners to retain title to the SNF at all times and delineate responsibility between PFS and its customers for decontamination expenses, insurance, and indemnification/liability and defenses limitations. So too, the Staff maintained, LC-4 relating to customer creditworthiness is properly implemented by the revised MSA provisions requiring at least annual (and more frequently if conditions warrant) customer submission of, and PFS determinations regarding, financial/creditworthiness information, and furnishing PFS with authority to require additional customer financial assurances, including advance payments, irrevocable letters of credit, third-party guarantees, and performance bonds. Finally, the Staff asserted that the revised MSA makes it clear that PFS will not voluntarily terminate its responsibility for the Skull Valley facility before providing all agreed spent fuel storage services under its customer agreements

and completing its licensing/regulatory obligations under its license, thus fully implementing LC-5. *See id.* at 8-9.

In its response, the Staff also assessed the PFS motion as it attempts to address the State's objections to the MSA and indicated it agrees with the views expressed by PFS on each of those matters. Regarding the purported need to make the MSA inviolable by incorporating its provisions as license conditions, the Staff declared that while the Commission in CLI-00-13 made clear the importance of the wording of the sample service agreement provisions, it also indicated that each contract did not have to incorporate the same wording ''slavishly.'' The Staff further noted that although the Commission could have ordered such incorporation, it instead referred to the existing Staff materials license decommissioning financial assurance guidance that sets forth sample contract language, indicating a clear intent that license incorporation of the MSA was not required and establishing that this State argument is meritless. *See id.* at 10-11.

Addressing next the State's assertion that the incorporation of MSA provisions that were not part of the record previously before the Board renders its prior summary disposition ruling in LBP-00-6 wholly inoperative so as to require vacation, the Staff declared that a determination to set aside summary disposition would require that any differences be shown to be relevant and probative to the issues upon which summary disposition was granted. As to the State's specific claim that change from using member contributions, i.e., cash in hand, as the source of construction funding to PFS reliance on debt financing constituted a material change, the Staff noted that in its response to the earlier PFS dispositive motion it indicated such financing was an acceptable means of satisfying LC-1 and that it had declared it considers a contractual obligation would fulfill the license condition requirement that funding be ''fully committed'' before construction begins. Further, the Staff found without substance the State's concerns that PFS will never have significant cash reserves or liquid assets relative to its liabilities, will have very little cash flow, and will not have on hand a previously identified sum of **x x x x x x x x x x x x** before any SNF was shipped. According to the Staff, the State's concerns about cash reserves and cash flow are without merit given the MSA provisions that require its customers to pay all facility operating and maintenance costs, while the State's **x x x x x x x x x x x x** figure, as PFS asserted in its motion, misrepresents the now-superseded PFS plans, which would have required customer payments for each canister to be received prior to shipment of that canister. *See id.* at 11-13.

As to other asserted MSA deficiencies, the Staff did not agree with the State's concerns about the ambiguity and complexity of certain MSA terms. With regard to the term ''aggregate usage,'' the Staff declared it unambiguous, noting that the State's sole interpretation correctly defined it, and asserted that the State's concern ultimately is irrelevant because in refining the MSA PFS has substituted the term ''reserved capacity'' that comports with the State's definition. Nor

did the Staff agree with the State that the definition of ‘‘term’’ is complicated given the definition of ‘‘aggregate usage,’’ but again finds this concern irrelevant given the definition of ‘‘reserved capacity’’ that has been incorporated into the revised MSA. And as to the State arguments about the long-term payment impacts of customers that withdraw their SNF from the facility and leave the nuclear industry, the Staff found this wholly speculative in light of the MSA creditworthiness assessment/financial assurance provisions so as not to provide a basis for denying summary disposition. *See id.* at 14-16.

With regard to the various State claims about the inadequacy of the MSA provisions permitting **x x**, the Staff indicated it agreed with PFS that the State has not explained the significance of the **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x**; that the MSA makes clear that, until new commitments for replacement capacity are obtained, **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x**; and that PFS has leverage because partial payment is required prior to the receipt of a customer’s SNF. Additionally, the Staff found insubstantial the State’s concerns about the adequacy of the **x x x**/kgU amount of the loan in that such an amount would generate **x x x x x x x x x x x x** dollars in loans to cover **x x x x x x x x x x x x** dollars in construction costs and the revised MSA provides for an adjustment in the event construction is delayed. *See id.* at 16-17.

Also insubstantial, according to the Staff, are the State’s related arguments about the inadequacy of the MSA provisions regarding **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x.** Although noting the State questions the adequacy of the MSA **x x x x** provisions as they base repayment on ‘‘reserved capacity,’’ which the State asserted depends on knowing the unknowable fact of how long the Skull Valley facility will operate, the Staff declared that ‘‘reserved capacity,’’ which reflects the total MTU to be shipped by that customer and is the basis for its principal repayment obligation regardless of actual usage, does not depend on knowing the facility operating term. Moreover, with regard to the State’s assertion that cost recovery based on a 40-year facility life will underrecover principal if the facility only operates for 20 years, the Staff maintained that even if the facility only operates for 20 years, the MSA requires that **x x** the MSA contains a mechanism for recovering unforseen deficiencies during each operational year, and **x x**

x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x. As to the State's concern that linking **x x x x x x x x x x x x x x** to fuel delivery years will create an operating deficiency in some years, in addition to the declaration of Mr. Parkyn in support of the PFS motion indicating that PFS will accumulate sufficient funds **x x x x x x x x x x x x x x x x x x x x x x x x x x**, the Staff noted that the revised MSA addresses this argument adequately both by creating a formula whereby **x x.** Finally, the Staff maintained the State's assertions that the MSA does not apportion costs when construction costs are not fixed at **x x x x x x x x x x x x** and does not allow a determination of revenue shortfall are insubstantial in that, as PFS notes, the provisions of the MSA make it clear that customer payment obligations are based on the amount of PFS indebtedness, not a fixed amount of **x x x x x x x x x x x x.** *See id.* at 17-19.

The Staff also addressed four State creditworthiness concerns. Responding to the State's claim that the MSA is deficient because it has an indeterminate term and no cost of services estimate, besides indicating it agreed with the PFS arguments that cost of services have been adequately addressed at the June 2000 evidentiary hearing and the planned facility life clearly is 40 years, the Staff maintained that the State failed to explain why it is important for ensuring that the MSA creditworthiness provisions are adequate for the MSA to include a cap or estimation of services costs or specify the duration of the facility's term. Also not compelling, notes the Staff, is the State's concern that because many customers may close and decommission their facilities after shipping SNF to PFS, the MSA provisions requiring customer take-back will not be effective to ensure payments. According to the Staff, this claim is adequately addressed in the MSA provision that requires a customer that suspends or discontinues business to put in place financial assurances to cover amounts necessary to remove its SNF from the PFS facility. Also lacking an adequate explanation as to its impact on creditworthiness in light of the MSA's financial information disclosure and financial assurance provisions, according to the Staff, are the State's concerns that PFS customers will include various entities, including rate-regulated utilities, nuclear fuel leasing companies, or nuclear asset management companies, and that a customer approaching insolvency will attempt to mask its financial condition. Nor was the Staff persuaded by the State's argument that the Staff will need to constantly monitor the financial condition of PFS customers, indicating that under the applicable license conditions, the responsibility for making the annual creditworthiness evaluation would rest with PFS. *See id.* at 19-22.

Although recognizing the Commission's concern in CLI-00-13 that the Staff not be involved in making complex post-licensing legal and factual determinations relative to any license conditions, the Staff also labeled as insubstantial the State's assertions that the Staff is called upon to make such judgments under the revised MSA. The Staff agreed with PFS that the State's concern that (i) the timing and extent of construction was unknown is belied by the project scope, schedule, and cost estimate information provided by PFS; (ii) costs of service and the MSA term are open-ended is meritless given that the revenue inflow is not speculative and PFS may rely upon operating revenues; (iii) financial assurance can come only from a speculative inflow of customers willing to sign the MSA is itself speculative; and (iv) Staff may materially change the MSA is groundless given its responsibility to follow established regulatory provisions. *See id.* at 22-23.

Finally, the Staff was unwilling to accede to the State's argument that each of the PFS member utilities must be named as a co-licensee because they are de facto licensees. In addition to being beyond the scope of contention Utah E and the Commission's remand, the Staff noted that the State, despite citations to various MSA provisions, has not demonstrated that PFS is a shell over which its members exercise true control. Indeed, the Staff declared, the State has ignored various MSA conditions that make it clear PFS is, in fact, in control of the facility. *See id.* at 23-24.

4. State Reply to Staff Summary Disposition Response

In a January 5, 2001 reply to the Staff's response, with the observation that the Staff's response basically mirrored the PFS motion, the State nonetheless made several comments regarding the Staff's filing. *See* [State] Reply to the NRC Staff's Response to ''[PFS] Motion for Summary Disposition on Issues Remanded by CLI-00-13 on Utah Contention E and Confederated Tribes Contention F and Response to [State] Objections to the Adequacy of [PFS MSA] To Meet Part 72 Financial Assurance Requirements'' (Jan. 5, 2001) [hereinafter State Dispositive Motion Reply]. According to the State, the Staff failed to recognize the problems inherent with the ''evolving'' nature of the PFS MSA, which has and could still be changed substantially. Moreover, even under the revised MSA, there are still significant problems, such as the anomalies created when PFS changed from ''aggregate usage'' to ''reserved capacity'' as its cost allocation methodology. In the State's estimation, the Staff's inability to recognize the effects of these significant changes calls into serious question its ability to recognize when it is acting beyond the Commission's directive in CLI-00-13 that its post-hearing review must be ministerial. *See id.* at 2-3.

In its reply, the State also challenged the Staff's position that the substantive provisions of the MSA need not be incorporated into the license as conditions. The Staff's position that the Commission's approach in CLI-00-13 in not requiring

such license conditions is dispositive, the State declared, ignores the fact that at that time the Commission had no way of knowing that PFS would radically change its construction financing and O&M cost recovery schemes nor did it have before it the substantive concerns about those matters (and others) that the State has now raised. Also, the State declared, contrary to the Staff's suggestion, it is asking only that substantive MSA provisions be incorporated to provide the necessary reliability and finality to PFS financial assurance commitments. *See id.* at 3-5.

With regard to its concerns about PFS use of debt financing of construction costs, the State argued that the Staff's earlier endorsements of such financing were in the context of **x x.** Indeed, the State asserted, the Staff seems to have changed its mind regarding the prudence of such an arrangement, given the Staff's response to an earlier admission request in which it stated:

> ''PFS could have 100% debt financing[;] however, in practice the Staff would not expect this to occur, since 100% debt financing would create a large debt burden which is unlikely to be assumed under prudent business practices absent other compelling circumstances.''

Id. at 6 (quoting NRC Staff's Objections and Responses to the ''[State] Fourth Set of Discovery Requests Directed to the NRC Staff (Utah Contention E)'' (Jan. 28, 2000) at 10). Additionally, according to the State, the PFS scheme is contrary to what the Commission was willing to permit in its decision in *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 309 (1997) in which the Commission by license condition did not allow more than 70% debt financing of construction costs. Nor is the Staff correct, according to the State, that there has been no showing of a clear need for having **x x.** Finally, the State challenged the Staff's argument that the State has not substantiated its claim that **x x x**/kgU is insufficient to cover construction costs, asserting that regardless of whether this figure would generate **x x x x x x x x x x x x** to cover **x x x x x x x x x x x x x** in estimated costs, the MSA provision governing the conditions on customer loans does not require customers to loan PFS the actual costs of construction, thereby creating the possibility it will not have construction funding. *See id.* at 5-7.

With regard to the Staff's arguments in connection with the MSA's creditworthiness provisions, the State first noted that at the June 2000 evidentiary hearing, **x x.** The State then explained that, notwithstanding the Staff's argument that there is no explanation of why the State asserts the MSA must include a cost cap or cost estimation for creditworthiness checks to be effective, for such a credit check to be useful, the scope of potential debt must be known. So too, the State declared, the Staff's similar argument regarding the State's creditworthiness-related claim that the MSA needs to specify a term of duration indicates the Staff's lack of appreciation of the significant uncertainties that face PFS over the 40-year (or longer) term during which PFS must rely on MSA terms and conditions to generate all operating revenue in a rapidly changing industry in which PFS members, such as Southern California Edison, face bankruptcy and other market vicissitudes. Also, according to the State, equally troubling, and providing further support for including substantive MSA provisions as license conditions, is the Staff's argument that post-licensing, the Staff will not monitor or otherwise review the financial conditions and finances of PFS customers, thereby creating a situation that improperly leaves the public in the hands of PFS to ensure its customers' creditworthiness to provide PFS needed revenues in a turbulent energy market. Finally, the State expressed its disagreement with the Staff's assertion that Staff review of customer finances is not an issue within the scope of contention Utah E. Paragraph 9 of that contention raises concerns about the financial assurance impact of a customer breaching a service agreement, becoming insolvent, or otherwise not making payments, which are concerns the State declared PFS has attempted to address through creditworthiness checks, the implementation of which must be subject to post-license reviews by the Staff. *See id.* at 8-10.

Also unrebutted by the Staff, the State maintained, is the State's assertion that the concerns it raises about the PFS financial plan will require the Staff to make complex legal and factual judgments to assess PFS compliance with 10 C.F.R. § 72.22(e). Given the overly optimistic nature of the evolving PFS plan, which provides no cash reserves, creates the possibility of construction loans in amounts inadequate to fully fund actual construction costs, and depends on speculative customer inflow and operating revenues, the result can only be a post-license Staff

review mired in the types of complex determinations in which the Commission in CLI-00-13 has indicated the Staff should not be involved. *See id.* at 10-11.

E. PFS Motion To Strike/State Responsive Filing

1. PFS Motion To Strike

Also on January 5, 2001, PFS submitted a motion seeking to strike portions of the State's December 22, 2000 dispositive motion response. *See* [PFS] Motion To Strike Portions of [State] Response to [PFS] Motion for Summary Disposition on Issues Remanded by CLI-00-13 on Utah Contention E/Confederated Tribes Contention F (Jan. 5, 2001) [hereinafter PFS Motion To Strike]. Such action is appropriate, according to PFS, for those matters that either should have been raised when the State filed its objections to the PFS MSA or are outside the scope of the Board's jurisdiction pursuant to the Commission's remand in CLI-00-13. In this regard, PFS asserted that the scope of the Commission's remand was limited to a determination of whether the MSA meets all financial assurance license conditions and is adequate to address the concerns raised in contention Utah E. Further, PFS maintained that the Commission's remand defining how objections to the MSA were to be raised and adjudicated contemplated that following State objections to the MSA, PFS would be entitled to demonstrate it was entitled to summary disposition in connection with those concerns, thus precluding the State from introducing new objections in its response to that motion when PFS would have no opportunity to address those concerns and demonstrate to the Board they precluded summary disposition. *See id.* at 4-6.

PFS claimed that seven matters fall into one or both of these categories and so should be stricken as a basis for the State's response. The first is the State's claim that the MSA does not contain provisions that create adequate cash reserves or provide adequate construction and O&M funding over the life of the proposed Skull Valley facility. According to PFS, this argument is outside the scope of the remanded proceeding in that it directly challenges the sufficiency of Commission-approved LC-1 and LC-2, given that neither requires a cash reserve, but calls for construction funding to be ''fully committed'' prior to construction and ''prices'' to be sufficient to cover facility costs. *See id.* at 6-7.

Also meriting exclusion is the State's summary disposition response argument (and the accompanying portion of its statement of material facts in dispute), not raised in its objections, **x x.** According to PFS, although the State did challenge the sufficiency of the MSA's creditworthiness provisions to identify customers with

financial difficulties and address any resulting funding shortfall through financial assurance mechanisms, it did not claim a deficiency because the MSA failed to provide that a customer's default could be recouped **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x.** *See id.* at 7.

PFS declared exclusion is appropriate as well for the State's argument that the MSA creates a cost payment deficiency by providing that a customer, upon removal of its SNF from the PFS facility, is obligated to make service costs payments for such fuel only for the remainder of the storage period specified in the customer's storage schedule. According to PFS, although the State claims this deficiency arose when PFS changed the cost allocation basis from ''aggregate usage'' to ''reserved capacity,'' in fact this argument was equally applicable under the ''aggregate usage'' cost allocation basis and so should have been raised in the State's objections to the MSA. In addition, PFS noted it now has changed the MSA to require expressly that a customer removing SNF from the PFS facility remains obligated to pay its proportional share of the PFS service costs through the end of the service agreement term, which runs until PFS license termination. *See id.* at 8.

Purported MSA ambiguity regarding whether or how PFS will recoup its multimillion dollar capital investment in developing and using a dry cask transfer system is the fourth issue PFS asserted should be stricken from the State's response (and the corresponding portions of its statement of material facts in dispute) given that the State did not even mention the dry cask storage system in its objections. Also to be stricken (along with the corresponding portions of its statement of material facts in dispute) are State issues regarding the party responsible for SNF canister and cask costs and for transportation costs. PFS declared this appropriate because the State's concerns about **x x.** *See id.* at 9.

Finally, PFS sought to have expelled the State's argument (and the corresponding portions of its statement of material facts in dispute) regarding uncertainty about Price-Anderson Act liability coverage for SNF received from another Part 72 facility. According to PFS, this matter is outside the scope of the Commission's remand, having been addressed and dismissed by the Board in its summary disposition ruling and not having been the subject of any Commission discussion, and was not raised in the State's objections. *See id.* at 9-10.

2. *State Motion To Strike Response*

In a January 16, 2001 response, the State asserted that the PFS motion to strike is without merit in all respects. *See* [State] Response to [PFS] Motion To Strike Portions of [State] Response to [PFS] Motion for Summary Disposition on Issues

Remanded by CLI-00-13 on Utah Contention E/Confederated Tribes Contention F (Jan. 16, 2001) [hereinafter State Motion To Strike Response]. Initially, the State asserts that a major premise of the motion is incorrect in that the Commission remand is not as circumscribed as PFS asserts. According to the State, the issue before the Commission in CLI-00-13 was whether the Commission's *Claiborne* ''license conditions'' approach under 10 C.F.R. Part 70 could be extended to a Part 72 ISFSI applicant like PFS. Thus, the Commission did not approve LC-1 and LC-2, but merely affirmed the Board's LBP-00-6 decision insofar as it approved the use of license conditions as part of the PFS financial assurance showing and remanded to the Board with a directive that PFS produce a sample service agreement meeting all financial assurance license conditions and that the State be afforded an opportunity to address the adequacy of the service agreement to meet its contention Utah E concerns. The motion to strike, the State declared, is an attempt by PFS to constrain the State from exercising the opportunity afforded by the Commission to address MSA adequacy to meet the State's contention Utah E concerns, an exercise that is all the more prejudicial to the State given the prior refusal of PFS to produce any MSA-related discovery documents. Certainly, the State declared, if in response to the Commission's remand, PFS decides to make substantive changes to the financial plan it previously has proffered to the Commission, the Board, and the parties, then the State must be given an opportunity to dispute that funding scheme, including the implementability of LC-1 and LC-2. *See id.* at 3-4.

The State also contended that, as a procedural matter, the PFS motion is misplaced. According to the State, a motion to strike is not to address the merits of a pleading as a reply would, but is to confine itself to the procedural sufficiency of the filing and any accompanying affidavits. In this instance, however, there were no procedural defects in the State's pleading given that the State addressed PFS MSA changes made after its objections or raised matters within the scope of the Commission's remand. Further, given that the State has had no opportunity for discovery relating the MSA and so is forced to make its case based on the document itself, to permit PFS to use the procedural posture of this case to keep the State from raising relevant and material concerns amounts to an improper lessening of the PFS summary disposition burden. *See id.* at 5-6.

Turning to the specific points made by PFS in support of its motion to strike, in connection with the third issue proffered by PFS the State asserted that, contrary to the PFS claim that the State's argument regarding the lack of a mechanism to pass through service costs if a customer withdraws SNF before the end of the MSA term could have been made regardless of the MSA revision from ''aggregate usage'' to ''reserved capacity,'' this problem as well as the second PFS issue of passing costs in instances when PFS is unable to collect all invoiced costs from customers arose because of PFS drafting changes that were provided to the other parties and the Board on December 4, nearly a month after the November 7 State

objections. Alternatively, the State declared, PFS is attempting to use its motion as a vehicle for improperly making substantive reply arguments, as is evidenced by its statement advising the Board that PFS intends to change the MSA to expressly require that a customer that removes SNF from the facility will remain obligated to pay its proportional share of PFS service costs relative to such fuel through the end of the service agreement term, i.e., when the PFS license is terminated. *See id.* at 7-8.

So too, in addressing PFS issues 4 through 7, the State declared that these were raised in whole or in part in response to PFS drafting changes. In this regard, the State noted that the black-line version of the revised MSA attached to the PFS dispositive motion shows changes to the Schedule 4 list of cost components, including those relating to cask and canister costs and transportation costs. Additionally, according to the State, Schedule 4 is silent concerning PFS return on dry transfer system capital investment and nuclear insurance coverage of shipments from a Part 72 facility. Again, the State asserted it would be inequitable to permit PFS to make drafting changes but not allow the State to comment on the effect of those changes. *See id.* at 9.

Finally, the State addressed the first PFS assertion that the State's arguments regarding the lack of cash reserves and sufficient construction and O&M funding under the MSA are outside of the scope of the proceeding. According to the State, these are arguments that the State has raised consistently relative to contention Utah E so as to be within the bounds of the Commission's remand and thus not subject to being stricken. Further, the issue of cash reserves highlights the shortcomings of the MSA in the current volatile power industry environment in which disruptions and bankruptcy are extant and should be considered in the context of evaluating the PFS dispositive motion. *See id.* at 9-10.

II. ANALYSIS

A. PFS Summary Disposition Motion/Motion To Strike

The chronology of the parties' filings would suggest that the State's reopening motion be considered first. It is apparent, however, that a number of the concerns raised in support of that motion overlap with the matters at issue relative to the PFS dispositive motion. In this regard it has been noted that

> to justify the granting of a motion to reopen the moving papers must be strong enough, in the light of any opposing filings, to avoid summary disposition. Thus, even though a matter is timely raised and involves significant safety considerations, no reopening of the evidentiary hearing will be required if the affidavits submitted in response to the motion demonstrate that there is no genuine unresolved issue of fact, *i.e.,* if the undisputed facts establish that the apparently significant safety issue

> does not exist, has been resolved, or for some other reason will have no effect upon the outcome of the licensing proceeding.

Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), ALAB-138, 6 AEC 520, 523 (1973) (footnote omitted). Given this parallel between summary disposition and reopening, we believe it is appropriate to look to the resolution of those issues, along with the others involved in the summary disposition motion and the related motion to strike, before considering the State's reopening motion.

1. Summary Disposition and Motion To Strike Standards

In numerous other instances in this proceeding, we have described the standard governing summary disposition as follows:

> Under 10 C.F.R. § 2.749(a), (d), summary disposition may be entered with respect to any matter (or all of the matters) in a proceeding if the motion, along with any appropriate supporting material, shows that there is ''no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.'' The movant bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts not at issue and any supporting materials (including affidavits, discovery responses, and documents) that accompany its dispositive motion. An opposing party must counter each adequately supported material fact with its own statement of material facts in dispute and supporting materials, or the movant's facts will be deemed admitted. *See Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993).

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-02-20, 56 NRC 169, 180 (2002). We again use these standards in evaluating the PFS dispositive motion regarding the sufficiency of its MSA relative to contention Utah E. Further, with regard to the PFS motion to strike, such a motion is an appropriate mechanism for seeking the removal of information from a pleading or other submission that is ''irrelevant,'' *Power Authority of the State of New York* (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-01-14, 53 NRC 488, 514 (2001), or, in the context of summary disposition, portions of a filing or affidavit that contain technical arguments based on questionable competence, *see Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-85-29, 22 NRC 300, 305 (1985).

2. PFS Dispositive Motion

a. Scope of Remand/Sufficiency of Previous Summary Disposition Decision

Given that the matters now before the Board arose as a direct response to the Commission's August 2000 determination relative to the Board's referral of its March 2000 summary disposition ruling, we think it important to address initially the parties' related legal disputes regarding (i) the scope of that Commission remand; and (ii) the continued efficacy of that Licensing Board summary disposition determination relative to portions of contention Utah E.

In considering the first matter, we note that the Commission in CLI-00-13 made clear that in relying upon PFS service agreement language commitments in granting summary disposition in favor of PFS, the Board's shortcoming was in going ''too far in putting evaluation of the legal effectiveness of service agreements into the hands of the NRC Staff without itself reviewing a sample service contract.'' *See* CLI-00-13, 52 NRC at 35. Further, to correct this deficiency the Board was to direct PFS to produce ''a sample service contract that meets all financial assurance license conditions,'' including those specified in that Commission decision, and provide the State with an opportunity to address ''the adequacy of the service contract to meet the concerns raised in Contention [Utah] E,'' with the caveat that PFS would be entitled to summary disposition relative to any State objections the Board determined were insubstantial. *Id.* While the Commission's directions to the Board thus are clear, in resolving this matter, we nonetheless think it important to remember the context within which the Board made the initial summary disposition ruling that was the subject of this Commission review.

In LBP-00-6, the Board found that as to the ten paragraphs or subparts of contention Utah E, the two then-existing Staff proposed license conditions and/or four stated PFS service agreement element commitments addressed sufficiently the substance of those State concerns such that summary disposition in favor of PFS was appropriate in whole or in part on nine of those subparts, with the remaining cost estimate/onsite liability insurance matters subject to consideration at the June 2000 evidentiary hearing. In this light, and bearing in mind the Commission's directions as to what is before the Board for resolution vis a vis the MSA, we find of paramount interest in this remand the question of whether the PFS-provided sample service agreement adequately implements what are now the six non-onsite liability insurance Commission-directed license conditions so as to address adequately the nine contention Utah E subparts that were the subject of the Board's March 2000 dispositive motion ruling.

Having said this, it is apparent we do not accept the State's assertion that simply by reason of the changes introduced by PFS in the MSA, as compared to its previous representations regarding service agreement content, there is no

basis upon which to proceed to summary disposition in this instance. To be sure, the extensive nature of some of the changes to the PFS financial qualifications scheme, which were proffered less than 6 months after the Board (or less than 2 months in the case of the Commission) had placed significant reliance on those terms was unexpected, to say the least. Nonetheless, to say those changes render the Board's decision a nullity that should be vacated is too sweeping. Rather, there having been no change in contention Utah E that was the focus of that decision,[7] as we discuss below, in our estimation what the Commission's remand requires is that we revisit the matters at issue in that contention in light of what are now the changed circumstances arising from the PFS MSA.

b. Adequacy of PFS MSA To Implement the Commission's License Conditions Relative to Contention Utah E

In its summary disposition motion, PFS attempts to establish, relative to each of the six non-onsite liability insurance license conditions, that its MSA implements that condition in a way that is adequate to address any implicated contention Utah E concerns so as to warrant a ruling in its favor, a position the Staff supports and the State opposes. We likewise consider each of the six, albeit in the context of the particular contention Utah E concerns it implicates.

(i) SUBPART 1 — ADEQUACY OF PFS OWNERSHIP INFORMATION

In our initial summary disposition ruling, the Board found that this portion of the contention, which raised concerns about the ability or willingness of the original PFS members to fund construction, was amenable to summary disposition in favor of PFS because LC-1 would not allow facility construction to move forward unless sufficient funds, including equity contributions from PFS members, had been committed to the project. *See* LBP-00-6, 51 NRC at 119. There is now a dispute about the nature of sufficient funding, given the MSA provisions that utilize **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** as the basic source of construction funding, which we discuss in more detail in section II.A.2.b(ii) below. Nonetheless, with respect to this subpart the fact remains that, as was previously the case, inadequate funding in whatever form will preclude construction from going forward.

[7] Although the Board required that PFS outline what the changes the MSA made to any previous PFS financial qualifications representations to the Board and the other parties and subsequently provided an opportunity for the submission of late-filed contentions relative to the MSA, the State chose to rest on its existing contention, which remains the issue statement before us.

In connection with the MSA, however, as was noted in section I.C.1 above, the State now argues relative to the PFS member-customers that it is apparent the business model the MSA fosters, which includes MSA provisions that make member-customers liable for SNF sent to the facility (sections 11.1, 11.2, and 20.1), make them the owners of their storage casks and canisters (section 11.2), require them to add PFS to their insurance polices as an insured (section 17.1.1(c)), accept the PFS liability cap on insurance on the amount of insurance it will carry (section 20.3), and fund all PFS services (section 13.4), is one that establishes a principal-agent relationship between PFS and its member-customers. By creating a shell designed to obfuscate the fact that these entities have responsibility and control over PFS, the State declares that, in accord with the Appeal Board's *Marble Hill* precedent, *Public Service Co. of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-459, 7 NRC 179, 198-202 (1978), the MSA establishes that PFS member-customers are required to be made co-applicants on the PFS license.

We cannot agree with this legal interpretation. Putting aside the not-inconsequential PFS and Staff objections that this claim is beyond the scope of contention Utah E, *see* PFS Dispositive Motion at 23, Staff Dispositive Motion Response at 24, as well as the fact that the logical extension of the State's position (at least based on the MSA provisions cited) would be to make all PFS customers (members or otherwise) co-applicants, we find the *Marble Hill* precedent inapposite, given that the entities involved there were co-owners of the facility, which the PFS members here clearly are not. *See* Revised MSA section 11.4 (PFS has facility title at all times). More to the point are the Commission's endorsements of the limited liability corporation as a stand-alone applicant/licensee in a number of recent reactor operating license transfer cases, including one in which the limited liability corporation also would hold an ISFSI license, which implicitly (if not explicitly) resolves this matter. *See, e.g., Monticello,* CLI-00-14, 52 NRC at 57.

Thus, in connection with contention Utah E, subpart 1, we find nothing in the State's objections relative to the MSA that creates a material factual dispute or otherwise precludes a ruling that summary disposition in favor of PFS on this subpart is again appropriate.

(ii) SUBPART 2 — ADEQUACY OF PFS FINANCIAL BASE

In our earlier summary disposition ruling, we noted this contention Utah E subpart centers on claims about the adequacy of the PFS financial base to support construction and operation and the potential for facility termination prior to license expiration. *See* LBP-00-6, 51 NRC at 121.

x x

x x.

Regarding the PFS use of loans for construction funding, as was noted earlier, it is the State's position that the PFS plan, as reflected in its revised MSA, **x x x x x x x x x x x x x x x x x x x x x x** is inappropriate because **x x x x x x x x x x x x x x x x x x** and, given the current financial instability and volatility in the energy markets, PFS is unlikely to be able to obtain funds from other sources; **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x**; and PFS has no leverage to collect unpaid debts. Additionally, the State questions whether the **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** is adequate to cover any increased costs if there is a delay in Phase I construction if costs rise beyond the MSA Schedule 5 escalators and apparent lack of any escalators for Phases II and III. For the reasons set forth below, we find each of these objections insubstantial.

Regarding the general State challenge to the use of **x x x x x x x x x x x x x x x** as the basis for financing construction as expressed in its reopening motion and its summary disposition responses, nothing in the Commission's jurisprudence or anything cited by the State prohibits such a financing arrangement or suggests a preference for the type of member equity funding/customer prepayment scheme that PFS indicated initially that it intended to utilize. **x x.**[8] Relative to the seemingly related concerns about the **x x x x x x x x x x x x x x x x x x x x x** and the energy

[8] x. *See* State Dispositive Motion Reply at 6.

market volatility and instability, aside from the point that an ''[a]pplicant cannot be required to prove that uncertain future events could never happen,'' *Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Unit 3), CLI-01-3, 53 NRC 22, 27 (2001), both turn on the unsupported assumption that one or more of the PFS members or customers, which by all indications would be entities subject to NRC financial assurance requirements, will inevitably fail to abide by the specific provisions of their service agreements regarding reimbursement to PFS, thus causing financial problems for PFS that it cannot address using the various MSA section 15 remedy mechanisms. *Compare Monticello,* CLI-00-14, 52 NRC at 49-50 (cost passthrough contract with state-regulated utility adequate to establish financial qualifications).[9] By the same token, the availability of the MSA section 15 remedy mechanisms, along with the MSA provision (section 13.5.2) governing prior receipt of partial customer payments prior to PFS receipt of customer SNF, make it apparent that PFS has significant debt collection leverage. Finally, relative to the adequacy of the **x x x x x x x x x x x x x x x x x x x x x** in conjunction with any MSA Schedule 5 escalator factors in the event of a delay in Phase 1 construction, putting aside the fact that the amount to be collected under this figure exceeds Phase 1 construction cost estimates by some **x x x x x x x x x x x x x x x x x x x x x x,** the State has made no specific showing that the escalator factors used are inadequate or that other factors should have been employed, other than the blanket claim that anything less than stated customer responsibility for all construction costs leaves the potential for uncovered costs and so is inadequate. Similarly, the State's general claim that high levels of inflation and technology/regulatory-driven costs changes are not unknown so as to cause concern about the lack of denominated escalators for Phases II and III, Sheehan Declaration at 8, is insufficient to create a material factual dispute given the specific PFS showing that construction costs for these phases would need to escalate on the order of 18% per year before exceeding the funds provided for under MSA section 13.2, *see* PFS Dispositive Motion at 19 n.40.

---

[9] Although the State has suggested that the complex structure of nuclear facility operating companies and their affiliates puts this matter in question, *see* State MSA Objections at 20, as PFS noted in its reply findings relating to the evidentiary presentations on contention Utah E/Confederated Tribes F, Financial Assurance, *see* [PFS] Reply to the Proposed Findings of Fact and Conclusions of Law of the [State] and the NRC Staff on Contentions Utah E/Confederated Tribes F, Utah R, and Utah S (Aug. 28, 2000) at 14 n.19, consistent with *Monticello,* the financial assurance required of PFS customers under MSA section 15 could be demonstrated by their status as electric utilities whose rate bases include costs to be paid to PFS. *See also* 62 Fed. Reg. 44,071, 44,077 (Aug. 19, 1997) (Commission policy statement on electric utility industry restructuring and economic deregulation noting that existing 10 C.F.R. Part 50 regulatory framework is sufficient to provide reasonable assurance of the financial qualifications of both electric utility and non-electric-utility applicants and licensees). As it reviews the contents of the actual agreements negotiated by PFS with its customers, *see* CLI-00-13, 52 NRC at 35, customer financial assurance is an item we anticipate the Staff would confirm.

Regarding the efficacy of the MSA cost passthrough provisions, a matter also posited in the State's reopening motion and as part of the PFS motion to strike,[10] as our discussion above regarding **x x x x x x x x x x x x x** suggests, and as we have otherwise noted today in our decision regarding the efficacy of PFS construction and operational cost estimates relative to the Commission's financial qualifications requirements, *see* Partial Initial Decision of May 27, 2003, LBP-05-21, 62 NRC 248, 301 (2005), we see nothing fundamentally deficient with such an arrangement. To be sure, it may create a concern for PFS members/customers to the degree such an arrangement generates uncertainty about the costs and expenses associated with storing SNF at the facility, but those are matters they must assess in making a business decision whether to enter into the MSA-defined contractual arrangement with PFS.[11] And, notwithstanding license issuance, under LC-1 and LC-2, it is whether enough customers are willing to accept such an arrangement that will control whether this facility will be built and operated. Moreover, to the degree the State has concerns about continued customer viability in the context of facility operation and the concomitant lack of a large PFS cash reserve to address this purported (albeit somewhat overstated) problem,[12] as we noted relative to the question of **x x x x x x x x x x x x x x x x x x x x x x x x** above, general, undifferentiated concerns about the future viability of PFS customers are not adequate to establish a lack of compliance with the Part 72 financial assurance provisions, particularly when such concerns are expressed (1) relative to entities already subject to Part 50 financial qualifications requirements, *see Monticello,* CLI-00-14, 52 NRC at 51 (rate-regulated utilities presumed to have reasonable assurance of receiving sufficient revenue to fund safe operation of plants); and (2) in the face of MSA requirements for regular, **x x x x x x x x x** payments of all PFS estimated costs, **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x**

---

[10] Although we deal with these and other reopening motion arguments in the context of the PFS summary disposition claim relative to contention Utah E, as we explain in section II.B below, our finding they are without substantive merit so as to require further adjudicatory consideration would be equally applicable to the State's reopening request.

[11] **x x.** *See* PFS Dispositive Motion at 20 & n.42.

[12] As PFS notes, the State's concern in this regard was based largely on its misstatement that PFS would receive operational cost payments totaling some **x x x x x x x x x x x x** for all the first 10,000 metric tons of spent fuel prior to shipment, when in fact it would receive only about one-eighth of that figure prior to receipt of the specific canisters. *See* PFS Dispositive Motion at 12-14.

x x x x x x x x x x x x x,[13] plus a requirement to pay accrued actual costs **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x.** Thus, we find nothing in the ''passthrough'' concept that is violative of the agency's financial assurance regulations.

Finally, under this subpart, the State also raises a concern about the continued operation of PFS through license expiration. LC-5 now states that the PFS customer service agreements must include a provision that requires PFS not to terminate its license prior to furnishing the spent fuel storage services covered by the agreement. Yet, as PFS points out, MSA sections 23, 24.3.1, and 24.3.4 cover this requirement by (1) defining the ''term'' of the agreement as continuing until such time as PFS has completed its licensing or regulatory obligations under its license and the license is terminated or revoked; (2) prohibiting PFS from taking any voluntary action to terminate its existence during the agreement term; and (3) precluding PFS or a customer from terminating the agreement between the time facility operation begins and the end of the term.

The State thus having interposed no material factual issues or shown there is a substantial deficiency in the MSA in connection with this portion of contention Utah E, summary disposition on this subpart is appropriate as well.

(iii) SUBPART 3 — ADEQUACY OF PFS FUNDING DOCUMENTATION, INCLUDING BUSINESS PLAN AND SUBSCRIPTION AGREEMENTS

In LBP-00-6, 51 NRC at 122-23, in granting summary disposition the Board found that the concerns reflected in this portion of the contention Utah E were addressed by then-proposed Staff license conditions LC-1 and LC-2 and the fact that any facility construction/operation cost aspects of this contention would be addressed in the June 2000 hearing on subpart 6 of the contention. Given the Commission's endorsement of those Staff license conditions in CLI-00-13, 52 NRC at 36, and our separate decision today addressing the State's concerns about construction/operation cost estimates under subpart 6, *see* LBP-05-21, 62 NRC at 295-325, we find that summary disposition regarding this subpart is once again appropriate.

---

[13] Although the PFS hearing testimony as to the amount of this contingency figure would, in our estimation, constitute a commitment that provides a floor for such a cost figure, *see* PFS Dispositive Motion at 16 n.34, there apparently is nothing in the MSA that would preclude PFS from increasing that amount as an additional vehicle for covering unanticipated costs of whatever kind, including uncollected invoiced costs that the State claims raise a significant financial problem, *see* State Dispositive Motion Response at 13, and which PFS, in turn, maintains constitutes a newly raised assertion that should be stricken, *see* PFS Motion To Strike at 7.

(iv) SUBPART 4 — ADEQUACY OF PFS DOCUMENTATION ON CURRENT FINANCIAL STATUS

The Board in LBP-00-6, 51 NRC at 124, found that this concern about whether ''PFS will be permitted either to construct or operate the facility when there is an inadequate revenue stream to cover the costs reasonably involved in such activities'' was addressed by what are now LC-1 and LC-2. While this remains true in the post-MSA context, there also are the various MSA provisions discussed with respect to subpart 2, above, regarding construction loan adequacy and cost passthrough efficacy, all of which we find again provide an appropriate basis for summary disposition on this subpart.

(v) SUBPART 5 — PFS LIABILITY FOR SPENT FUEL CASKS

The Board's ruling in LBP-00-6, 51 NRC at 125-26, that summary disposition was appropriate for this contention subpart as it concerned the allocation of liability between PFS and its SNF customers was based on PFS commitments to (1) offer storage services only on the condition that each customer retain title to its fuel throughout the storage period; and (2) include in each customer agreement an assignment of legal and financial responsibility among customers, as SNF owners, and PFS. In CLI-00-13, 52 NRC at 36, the Commission made these commitments a license condition — LC-3 — that requires the PFS service agreement to include provisions addressing these matters. The MSA does so in several instances, including section 11.1, which mandates that title to the SNF remain with the customer at all times; section 13.6, which makes a customer/owner responsible for any contamination cleanup costs it causes; section 24.4, which makes the customer/owner responsible for removing its SNF from the site at the end of the agreement term at its own expense; sections 17.1 and 17.2, which define the responsibilities of PFS to maintain nuclear- and nonnuclear-related insurance; and section 20, under which the PFS warranty limitations and limitation of liability are identified, including its liability for any and all claims under the MSA, other than section 5.2 liquidated damages for failure to timely provide PFS-supplied shipping and transfer casks and ancillary equipment, not to exceed the amount obtained by PFS under insurance policies for such claims.

Regarding these provisions, the State has claimed, albeit principally in the context of its reopening motion, that the section 5.2 liquidated damages clause, along with the provision in section 21 to cover force majeure (i.e., act of God) costs, do not adequately account for the costs involved while the section 17.1 provisions create a ''monstrous labyrinth'' of liability distribution between PFS and its customers that would allow insurers and insured to deny responsibility. With respect to the former claim, as PFS points out, to cover such costs (for which the State has not provided any specific estimates) it has both the **x x x x x x x x** per year contingency funding as well as the authority under MSA section

13.4 to pass such costs along to its SNF customers. And as to the supposed section 17.1 liability labyrinth, as was explained in the affidavit of PFS nuclear insurance expert Hanson Pickerl, attached to the PFS reopening motion response, the Price-Anderson, nuclear worker insurance, nuclear property insurance, and supplier's and transporter's insurance policies that the customer owner and/or PFS are required to maintain have provisions defining the ''insured'' that are intended to allow ''seamless transition of coverage from one insurance program to the next during the course of nuclear fuel fabrication, use, shipment, and storage'' and so avoid disputes among nuclear liability insurers about coverage. *See* PFS Reopening Response, Declaration of Hanson D. Pickerl at 2-5. Finally, as was noted in LBP-00-6, 51 NRC at 126, to the degree this contention subpart had implications for State claims relating to the adequacy of PFS offsite and onsite insurance coverage, our summary disposition finding relative to the former insurance was not disturbed by the Commission ruling in CLI-00-13 while the latter, in conformance with LC-7, is being dealt with today in our separate initial decision on contention Utah E, *see* LBP-05-21, 62 NRC at 321-25.

There thus being no material factual dispute relative to these matters, we find summary disposition in favor of PFS on this subpart of contention Utah E is again appropriate.

(vi) SUBPART 6 — INADEQUATE COST ESTIMATES

As we indicated in LBP-00-6, 51 NRC at 108, PFS did not seek summary disposition regarding this contention subpart concerning the adequacy of PFS construction and operations cost estimates, which was the subject of the June 2000 evidentiary hearing and the initial decision that we issue today, *see* LBP-05-21, 62 NRC at 295-325. Nonetheless, a number of the MSA-related concerns interposed by the State relative to the PFS summary disposition motion arguably relate to this subpart and, as such, we deal with them in this context.

One of these items, also raised in the State's motion to reopen, concerns costs associated with return on equity and return on investment, items that purportedly were identified by PFS during the June 2000 hearing as not being operational costs but which are now covered as such costs under the MSA. Putting aside the fact that, regardless of how they were previously treated, under MSA section 13.4 they are passthrough costs that will be accounted for through collection along with other costs, the materiality of these costs as financial assurance deficiencies is not apparent given that MSA section 13.2 provides **x x.**

Another cost estimate item raised by the State is the question of dry transfer system cask costs, which is also the object of the PFS motion to strike. With

respect to the State's question of whether dry transfer system costs are covered under the MSA, PFS has resolved that matter with a redraft of the definition of ''Ancillary Equipment'' under section 1. Regarding the related issue of whether the cost of the PFS capital investment in developing and using its dry cask transfer system should be included under the MSA, also a matter referenced in the State's motion to reopen, the Board today resolves that question in its initial decision regarding subpart 6 of contention Utah E, with its holding that such costs are considered preconstruction costs that need not be accounted for under the MSA, *see* LBP-05-21, 62 NRC at 308-09, and so seemingly would be recoverable, if at all, as a return of investment under MSA Schedule 4.

Also raised as cost estimate concerns, and likewise subject to the PFS motion to strike, are purported MSA ambiguities regarding **x x.** Although the State asserts these items create a financial qualifications deficiency of a possibly unknown amount of unrevealed liabilities for PFS and its customers, we find these concerns lack materiality. **x x.** It may well be that PFS and/or its customers will find cause to improve these MSA clauses to further outline which is the case; however, as this possible need for a refinement has been presented by the State, it does not create a financial qualifications deficiency that has any regulatory significance under Part 72.

Finally, in connection with the MSA, the State raises a concern about the viability of cost estimates given the failure of PFS to specify whether it will build the Low rail line or utilize an ITF as the method for getting SNF from the rail main line to its Skull Valley facility more than 20 miles away. A similar argument was posited in the context of the June 2000 evidentiary hearing and is disposed of today in favor of PFS in our contention Utah E initial decision based on the fact that the estimated Low rail line costs envelop the ITF costs. *See* LBP-05-21, 62 NRC at 312. As such, that concern need not be considered further here.

Thus, to the degree the State has posited MSA-related cost estimate matters that are not dealt with in our initial decision today regarding contention Utah

E,[14] we find there are no material factual issues in dispute and that summary disposition in favor of PFS on those matters in the context of this contention Utah E subpart is appropriate.

(vii) SUBPART 7 — ADEQUACY OF EXISTING MARKET DOCUMENTATION

This contention Utah E subpart questions the need for PFS to document the adequacy of the existing SNF storage market through a showing of customer service agreement commitments sufficient to fund facility construction, operation, decommissioning, and contingencies. In LBP-00-6, 51 NRC at 127, we found that the PFS commitments requiring PFS to demonstrate sufficient committed funding for construction and service agreements with prices to cover operation, maintenance, and decommissioning costs over the entire license term rendered claimed concerns about market adequacy immaterial to the requisite section 72.22(e) reasonable assurance finding. Given that those PFS commitments now are embodied in Commission-endorsed license conditions LC-1 and LC-2, we again find summary disposition in favor of PFS appropriate relative to this contention Utah E subpart.

(viii) SUBPART 8 — PROPRIETY OF PFS USE OF DEBT FINANCING

In LBP-00-6, 51 NRC at 128, we found that the debt amortization stream of revenue concern embodied in this contention Utah E subpart was resolved by the PFS commitments that now are the basis of LC-1 and LC-2. As we discussed in connection with subpart 2, above, however, **x x.** As we also discussed in that section, we do not find the State's objections to that funding mechanism either create material factual disputes or evidence financial assurance inadequacies. Accordingly, we again grant summary disposition in favor of PFS on this subpart of contention Utah E.

(ix) SUBPART 9 — ADEQUACY OF PFS MEASURES TO ADDRESS SERVICE AGREEMENT BREACH

Relative to this contention Utah E subpart concerning cost coverage for service agreement breaches, in LBP-00-6, 51 NRC at 130, the Board found the PFS commitment that its service agreements would require customers to ''(1)

---

[14] In this regard, although principally in the context of its reopening motion, the State also raises a cost estimate concern about the need to account for **x x x x x x x x x x x x x** costs as part of the operating and maintenance expenses of the facility, a matter we resolve today in the context of our decision on contention Utah E, *see* LBP-05-21, 62 NRC at 318.

periodically provide pertinent financial information; (2) meet creditworthiness requirements; and (3) provide any necessary additional financial assurances (e.g., an advance payment, irrevocable letters of credit, third-party guarantee, or payment and performance bond)'' provided the requisite reasonable assurance such that summary disposition in favor of PFS was appropriate on this subpart. In CLI-00-13, those commitments were incorporated by the Commission into license condition LC-4, which in turn was addressed by PFS in MSA section 15, which among other things permits PFS to seek additional financial assurances if there has been any ''material adverse change'' in a customer's financial situation, and MSA Schedule 3.[15] The State, however, maintains that these measures are inadequate because they can only be employed once a financial problem has become apparent, at which time it is too late to utilize the various section 15 remedial tools. Moreover, the State declares, the potential remedy of returning the SNF to its owner is unsatisfactory if the customer is in bankruptcy, which could place the fuel under the control of a bankruptcy court and, if the situation is serious enough, cause the customer to lose its license to possess the fuel. Putting aside the fact this claim seems to suggest that LC-4 was deficient at its inception because that license condition declares financial assurance prepayment mechanisms, such as letters of credit, guarantees, and bonds, should be utilized only ''where necessary,'' rather than ab initio for all PFS customers as the State now suggests, *see* Sheehan Declaration at 10, this concern also is wanting as once again it is based on the notion rejected by the Commission in the financial qualifications area that the possibility of uncertain financial events the applicant cannot prove could never happen must be fully accommodated. *See Millstone,* CLI-01-3, 53 NRC at 27. As before, we find that there are no material factual issues in dispute and that summary disposition in favor of PFS on this subpart is appropriate.

[15] Also in the State-posited circumstance in which a PFS customer leaves the nuclear industry before the PFS license term is completed, *see* State MSA Objections at 15, these same financial assurance mechanisms would be applicable to address any concern about that customer's willingness to abide by its MSA financial commitments through the end of the MSA term, i.e., PFS license termination, *see* PFS Dispositive Motion at 17-18. Moreover, although the Staff is not responsible per se for monitoring the financial conditions of each PFS customer, *see* Staff Dispositive Motion Response at 22, nonetheless by virtue of its SNF proprietorship each customer that undertakes this long-term storage commitment is subject to the responsibilities imposed by NRC regulations and Staff oversight of its regulated activities, including any change in its proprietary interest such as the State-postulated situation in which Department of Energy ownership of fuel stored at the PFS facility becomes an issue, *see* State MSA Objections at 15 n.20.

(x) SUBPART 10 — ADEQUACY OF PFS RESOURCES FOR NONROUTINE EXPENSES

In connection with this contention Utah E subpart concerning a variety of nonroutine expense matters, as was noted previously, the Board in LBP-00-6, 51 NRC at 131-33, found summary disposition appropriate as to this issue statement except as it raised questions about the adequacy of onsite liability insurance, a matter that the State raises again in its reopening motion and that we, in accordance with LC-7, resolve today in our initial decision regarding contention Utah E, *see* LBP-05-21, 62 NRC at 321-25. Relative to the MSA, the State seeks to raise again one matter that we addressed in the making this ruling: its concern about the availability of Price-Anderson Act coverage relative to spent fuel transfers between two Part 72 ISFSI facilities. Citing MSA section 12 that states service agreement rights and obligations may be assigned to 10 C.F.R. Part 50, 70, or 72 licensees that meet creditworthiness requirements, the State now asserts this shows PFS itself contemplates potential shipments between Part 72 licensees. Putting aside the PFS request to strike this matter as previously determined in LBP-00-6, 51 NRC at 132, this section in fact provides no support for the State's claim and, as such, affords no basis for the Board to revise its prior summary disposition ruling in favor of PFS on this matter.

c. Other Claims Regarding MSA Efficacy

In addition to the foregoing claims that appear to relate to specific portions of contention Utah E, the State interposes several other objections to the PFS MSA that PFS asserts are subject to summary disposition in its favor. First, the State declares that the terms of the MSA are not sufficiently inviolate to satisfy the Commission's CLI-00-13 directive that key provisions of the service agreement be sufficient to guide subsequent Staff review of individual contracts. In this regard, the State maintains that the MSA clearly does not fulfill this Commission mandate. According to the State, PFS declarations of the illustrative nature of the MSA and its reservation of the power to negotiate future individual service agreements with alternative provisions providing comparable reasonable assurance are inconsistent with this Commission directive. As a consequence, the State maintains, PFS should be required to identify those MSA provisions that are inviolate and, after considering party comments on MSA provision inviolability and sufficiency generally, any provisions found to merit this label, with appropriate revisions, should be incorporated into the PFS license. *See* State MSA Objections at 5-7.

In describing its expectations regarding the sufficiency of MSA provisions as a basis for post-licensing Staff reviews of actual service agreement contracts negotiated by PFS, the Commission analogized this to the existing post-licensing

review scheme for material licensees under which Staff Regulatory Guide 3.66, Standard Format and Content of Financial Assurance Mechanisms Required for Decommissioning Under 10 CFR Parts 30, 40, 70, and 72, provides sample contract language for financial assurance documents. *See* CLI-00-13, 52 NRC at 35 n.6. In this instance, the Commission indicated that a Board-sanctioned MSA would provide the requisite Staff review guidance as the Staff seeks to ensure subsequent negotiated service agreement contracts meet the Commission's expectations as reflected in the seven Commission-adopted license conditions. *See id.* Incorporating all (or even substantial portions) of the MSA into the PFS license clearly would not be consistent with this Commission-endorsed guidance-based approach.

In this regard, however, the State further suggests that the MSA is deficient as a guidance mechanism because the overall financial scheme the MSA creates is ambiguous in significant aspects, requires the Staff to make judgments that are overly complex, and allows the Staff too much discretion in its sufficiency review of individual agreements. This is a matter of concern here because, as the Commission indicated in CLI-00-13, 52 NRC at 34, the focus of the Staff's post-licensing review process is verification that the Board-approved design is being adhered to. Nonetheless, the State's general complaint about ambiguity and the related complex and discretionary nature of Staff reviews is not borne out by the few specific examples it provides.[16]

In addition to its claims regarding the uncertainty that accrues to the PFS loan and cost passthrough mechanisms for funding facility construction and operation, which we have addressed previously, the State asserts that the initial MSA use in section 13.4 of the concept of ''aggregate usage,'' i.e., the ratio between an individual customer's aggregate usage (calculated by taking the sum for all years of the customer's SNF storage term of the number of MTU the customer will store during each year of that term, per the customer's MSA storage schedule) and all customers' aggregate usage, to determine a customer's proportional share of PFS service costs created significant ambiguity for the PFS cost recovery scheme. Although asserting this is not the case, PFS thereafter revised the MSA to allocate service costs using a ratio based upon ''reserved capacity,'' i.e., the total quantity of fuel a customer commits to store at the facility during the term of the customer's service agreement, thereby addressing a State concern about uncertainty over customer storage terms. Also, in the context of its motion to

[16] In this regard, the State also seeks to leverage what it considers Staff failures to recognize the problems with the ''evolving'' nature of the MSA into a basis for questioning the Staff's ability to recognize the bounds of its authority to engage in post-hearing review of adjudicatory matters, an argument we find inharmonious with the recognized proposition that the adequacy of the Staff's safety review is not relevant to the issue of whether a license application should be approved. *See Curators of the University of Missouri* (TRUMP-S Project), CLI-95-1, 41 NRC 71, 121 (1995).

strike, PFS advised the Board that it was revising MSA section 13.4 to require that a customer removing fuel from the facility would remain obligated to pay its proportional service costs share for that fuel through the end of the service agreement (i.e., PFS license termination), thereby addressing a State concern that a failure to change some of the language of this section with the ''reserved capacity'' revision had created the possibility that PFS would be responsible for abandoned capacity costs if customer fuel departs before the end of the service agreement term. The State, however, continues to express a concern about the ''reserved capacity'' approach **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** based on the **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** and as illustrating the ambiguity problem given the several MSA revisions that were involved. We, however, find neither of these concerns persuasive to negate the adequacy of the MSA under the agency's financial qualifications requirements or to foreclose the entry of summary disposition in favor of PFS, the former being another aspect of the cost passthrough scheme that we previously have found is not inconsistent with the agency's financial qualification requirements, *see* section II.A.2.b(ii) above, while the latter (which resolves the problem identified by the State) is indicative of the first-of-a-kind nature of the PFS facility rather than any fundamental defect in the Applicant's financial qualifications efforts.

Finally, the State identifies as an MSA deficiency the fact that the Staff in its post-hearing verification review will need to make factual and legal judgments that will entail discretionary determinations and complex analyses of the type the Commission warned against in CLI-00-13, because the MSA does not prescribe what is to be built and when, or the extent of PFS service costs or the MSA's term, and relies upon a speculative inflow of customers to establish the requisite financial assurance. Relative to the State's concerns about indiscriminate project planning and costing leading to an improper Staff verification review process, as set forth in our initial decision today regarding contention Utah E, *see* LBP-05-21, 62 NRC at 312-13, 320, we find that PFS has provided the information necessary to show it has fulfilled its financial assurance responsibilities in this regard. Moreover, as we have noted in section II.A.2.b(ii) above, the MSA mechanisms for funding facility construction and operation comply with the agency's financial assurance requirements. And to the degree those provisions create questions about the extent to which PFS will be able to find customers willing to contract with it for SNF storage services under the MSA, LC-1 and LC-2 make it clear that PFS bears the risk that its funding design will leave it unable to attract a sufficient number of customers and so be unable to receive authorization to construct and/or operate the facility. Also, as to the State's raised concern about the supposed indeterminate scope and length of the facility's operational term, whether this is for the two 20-year periods of an initial license that would entail the receipt and storage of 4000 SNF casks or something somewhat less, as the Staff has pointed

out, using the ''reserved capacity'' concept for proportioning costs, the fuel storage space reserved by the customer, not the length of the facility operation, is the compelling factor.[17]

Thus, as to these additional State concerns, we find no disputed material factual issues are involved and, further, that summary disposition in favor of PFS is appropriate as to these matters as well.

3. PFS Motion To Strike

As was noted in section I.E.1, in its January 2001 motion to strike, PFS requested that the Board exclude certain portions of the State's dispositive motion response and associated pleadings, essentially on the basis that it had failed to raise the claims in question as part of its previous MSA objections or reopening motion or, in one case, because the matter was previously ruled on and was not implicated by the Commission's remand. As we have noted above, we have dealt with each of the State's concerns implicated by the motion to strike in the course of our substantive discussion regarding the PFS dispositive motion and found those matters wanting as a basis for further proceedings. As such, we need not deal with the substance of the PFS motion, and thus deny it as moot.

B. State Motion To Reopen

There remains for our consideration the State's motion to reopen the closed evidentiary record relative to contention Utah E.[18] In this instance, although PFS and the Staff have made various assertions regarding the State's compliance with the several requirements set forth in section 2.734,[19] we think one or the other

---

[17] Recently, in the form of a motion for reconsideration of its decision in LBP-03-4, 57 NRC 69, regarding State concerns over the probability of military aircraft accidents in connection with the Skull Valley facility, PFS has put before the separate Licensing Board chaired by Administrative Judge Farrar the possibility of authorizing initial construction and operation of a significantly smaller, 336-cask facility. Currently, the license application before this Board outlines plans for a very differently sized facility, and it is upon the basis of that application that we make our ruling today.

[18] At the end of the June 2000 hearings, the Board closed the evidentiary record regarding the issues considered during those sessions, subject to any transcript corrections. *See* Tr. at 2683.

[19] The standard for granting reopening is set forth in 10 C.F.R. § 2.734, which states in pertinent part:

> (a) A motion to reopen a closed record to consider additional evidence will not be granted unless the following criteria are satisfied:
>
> (1) The motion must be timely, except that an exceptionally grave issue may be considered in the discretion of the presiding officer even if untimely presented.

(Continued)

of two matters is dispositive of the State's motion. First, as both PFS and the Staff noted and as our separate initial decision today regarding contention Utah E makes clear, *see* LBP-05-21, 62 NRC at 301, 318, the scope and focus of the June 2000 hearings on contention Utah E concerned the issues of the adequacy of PFS cost estimates relating to construction and operating expenses under contention Utah E, subpart 6, and onsite property insurance coverage under contention Utah E, subparts 5 and 10, not the how and why of the funding mechanisms PFS now proposes to use in its MSA to cover those cost items. As such, other than to the extent they relate to these limited ''cost estimate'' and onsite property insurance coverages issues, the State's claims provide no basis for reopening the record.

Additionally, under the Commission's reopening standard, the fact that newly proffered evidence relied upon as the basis for reopening is different from that set forth during the hearing is, in and of itself, not enough. Instead, in an instance when an initial decision has not yet issued, the proponent bears a heavy burden to show, among other things, that had the evidence been considered, a materially different result, i.e., a different outcome, would likely have obtained. *See Kansas Gas and Electric Co.* (Wolf Creek Generating Station, Unit 1), ALAB-462, 7 NRC 320, 338 (1978). In this instance, we are unable to conclude that such would be the case. As to those bases for the State's motion that we discuss in connection with section II.A.2 above, reopening is inappropriate for the reasons discussed therein in which we find, in essence, that these MSA-related concerns clearly would not have the requisite material effect on the outcome of the hearing. Moreover, as to the one reopening issue that is not discussed in that context — PFS utilization of the **x x x x x x x x** customer fee — although it apparently falls outside the scope of the June 2000 hearing, it also lacks any substance given the PFS indication that nothing in MSA section 13 indicates those costs are to be returned or rebated to the customer, a statement we accept as a binding commitment not to make such a rebate. *See* PFS Reopening Motion Response at 18 n.38.

---

(2) The motion must address a significant safety or environmental issue.

(3) The motion must demonstrate that a materially different result would be or would have been likely had the newly proffered evidence been considered initially.

(b) The motion must be accompanied by one or more affidavits which set forth the factual and/or technical bases for the movant's claim that the criteria of paragraph (a) of this section have been satisfied. Affidavits must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raised. Evidence contained in affidavits must meet the admissibility standards set forth in § 2.743(c). Each of the criteria must be separately addressed, with a specific explanation of why it has been met. Where multiple allegations are involved, the movant must identify with particularity each issue it seeks to litigate and specify the factual and/or technical bases which it believes support the claim that this issue meets the criteria in paragraph (a) of this section.

Accordingly, the State having failed to demonstrate that any of the items it proffered in support of its reopening request either fall within the scope of that evidentiary hearing or would have led to a materially different result, we deny its reopening request as well.

III. CONCLUSION

Acting in accordance with the Commission's directive in CLI-00-13, 52 NRC at 35, that (1) PFS be provided the opportunity to produce an MSA that meets the seven financial assurance license conditions adopted by the Commission; (2) Intervenors be given an opportunity to address the adequacy of the MSA to meet the concerns raised in contention Utah E; and (3) PFS be afforded to submit a dispositive motion relative to any Intervenor objections that the Board was to assess, granting summary disposition relative to those that are insubstantial and providing an evidentiary hearing on the contention as to any others, the Board has assessed the MSA submitted by PFS and the State's objections thereto in light of the December 4, 2000 PFS summary disposition motion, the January 5, 2001 PFS motion to strike portions of the December 22, 2000 State's response to that motion, and the November 7, 2002 State motion to reopen the record of the June 2000 evidentiary hearing regarding contention Utah E. With regard to the State's objections to the PFS MSA, the Board has concluded that the PFS motion for summary disposition should be granted as to all subparts of contention Utah E. Further, the Board denies (1) the PFS motion to strike as being moot; and (2) the State's motion to reopen as based on matters falling outside the scope of the evidentiary hearing record it seeks to reopen and/or as failing to demonstrate that had the information it now proffers been considered, a materially different result, i.e., a different outcome, would likely have obtained in the hearing.

For the foregoing reasons, it is this 27th day of May 2003, ORDERED, that:

1. The December 4, 2000 PFS motion for summary disposition regarding contention Utah E/Confederated Tribes F is *granted* as set forth in section II.A.2 above;

2. The January 5, 2001 PFS motion to strike portions of the State response to the December 4, 2000 PFS motion for summary disposition is *denied* for the reasons set forth in section II.A.3 above;

3. The November 7, 2000 State motion to reopen the June 2000 evidentiary record regarding contention Utah E is *denied* for the reasons set forth in section II.B above; and

4. Given previous party positions suggesting that financial assurance-related information may include proprietary or other sensitive data, on or before *Friday, June 20, 2003,* the State, PFS, and the Staff shall provide the Board with a joint

filing outlining each (1) proposed redaction of any part of this Memorandum and Order to which there is no objection, and (2) proposed redaction of any part of this Memorandum and Order to which there is an objection. The particular word or phrase to be withheld from public release shall be specified for each proposed redaction; blanket requests for withholding are disfavored. Further, in accordance with 10 C.F.R. § 2.790, the party seeking the proposed redaction shall at the same time provide a separate submission that describes with specificity (as supported by any necessary affidavits) the reasons for withholding each proposed redaction. Responses by any party objecting to a proposed redaction shall be filed on or before *Monday, June 30, 2003.*

THE ATOMIC SAFETY AND
LICENSING BOARD[20]

G. Paul Bollwerk, III, Chairman
ADMINISTRATIVE JUDGE

Dr. Peter Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland
May 27, 2003

[20] Pursuant to previous Board issuances on e-mail service of documents identified as potentially containing proprietary information, copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for PFS, the State, and the Staff. In addition, this date a memorandum was sent by e-mail to all the parties to this proceeding advising them of the issuance of this decision and the Board's determination to afford this decision confidential treatment pending a response by PFS, the State, and the Staff to the Board's inquiry under ordering paragraph 4 above. *See* Licensing Board Memorandum and Order (Notice Regarding Issuances Concerning Contentions Utah E/Confederated Tribes F and Contention Utah S) (May 27, 2003) (unpublished).

Although agreeing with the result reached here, because of illness Judge Kline was unavailable to participate in the final preparation of this decision.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Dr. Jerry R. Kline
Dr. Peter S. Lam

In the Matter of **Docket No. 72-22-ISFSI**
(ASLBP No. 97-732-02-ISFSI)

PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage Installation)

May 27, 2003

In this 10 C.F.R. Part 72 application by Private Fuel Storage, L.L.C. (PFS), for a license to construct and operate an independent spent fuel storage installation (ISFSI) on the Skull Valley, Utah reservation of the Skull Valley Band of Goshute Indians (Skull Valley Band), the Licensing Board finds relative to the challenges posed by Intervenors State of Utah and the Confederated Tribes of the Goshute Reservation in connection with their contention Utah E/Confederated Tribes F, Financial Assurance, that PFS has carried its burden of proof to demonstrate its financial qualifications in accordance with 10 C.F.R. § 72.22(e) to safely construct and operate the proposed Skull Valley storage facility and therefore concludes that this challenge to the PFS license application cannot be sustained.

FINANCIAL QUALIFICATIONS: CONSIDERATION IN INDEPENDENT SPENT FUEL STORAGE INSTALLATION PROCEEDINGS

Pursuant to 10 C.F.R. § 72.22(e), an ISFSI applicant must submit sufficient information to demonstrate its financial qualifications to carry out the activities

for which the license is sought. Among other things, the information must show that the applicant either possesses the necessary funds or has reasonable assurance of obtaining them, or by a combination of the two, the applicant will have the necessary funds available to cover (1) estimated construction costs, and (2) estimated operating costs over the planned life of the facility. *See* 10 C.F.R. § 72.22(e).

RULES OF PRACTICE: WITNESSES (BURDEN AND SHOWING FOR DEMONSTRATING QUALIFICATIONS)

When the qualifications of a witness are challenged, the party sponsoring the witness has the burden of demonstrating his or her expertise. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-410, 5 NRC 1398, 1405 (1977). A witness's expertise can be established by showing relevant knowledge, skill, experience, training, or education. *See Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 474-75 (1982) (citing Fed. R. Evid. 702).

RULES OF PRACTICE: BURDEN OF PROOF (FINANCIAL QUALIFICATIONS FOR INDEPENDENT SPENT FUEL STORAGE INSTALLATION)

The applicant bears the ultimate burden of proof in a licensing proceeding. *See* 10 C.F.R. § 2.732. Furthermore, to prevail on each factual issue, the applicant's position must be supported by a preponderance of the evidence. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-763, 19 NRC 571, 577, *review declined,* CLI-84-14, 20 NRC 285 (1984). In the context of a challenge to an ISFSI applicant's financial qualifications, the applicant must demonstrate by a preponderance of the evidence that it has established the requisite reasonable assurance in connection with its estimated construction costs and the estimated operating costs over the planned life of the facility.

FINANCIAL QUALIFICATIONS: INDEPENDENT SPENT FUEL STORAGE INSTALLATION (FINANCIAL ASSURANCE SHOWING)

The Commission, in clarifying what a showing of ''reasonable assurance'' would entail for an ISFSI applicant, has acknowledged that outside of the 10 C.F.R. Part 50 reactor licensing context, while the financial qualifications of an applicant would still be considered, the Commission would not hold the

applicant to the specific requirements of showing financial capability under Part 50. Nonetheless, as the Commission noted:

> Even when evaluating financial assurance under Part 50
>
> > ''The Commission will accept financial assurances based on plausible assumptions and forecasts, even though the possibility is not insignificant that things will turn out less favorably than expected. Thus, the mere casting of doubt on some aspects of proposed funding plans is not by itself sufficient to defeat a finding of reasonable assurance.''

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-00-13, 52 NRC 23, 31 (2000) (quoting *North Atlantic Energy Service Corp.* (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 222 (1999)). Further, the Commission confirmed that in the context of an ISFSI licensing proceeding, license conditions could be an acceptable method for providing reasonable assurance of an applicant's financial qualifications under 10 C.F.R. Part 72. *See id.* at 29.

FINANCIAL QUALIFICATIONS: INDEPENDENT SPENT FUEL STORAGE INSTALLATION (NATURE OF REASONABLE COST ESTIMATE)

To demonstrate reasonable financial assurance, an ISFSI applicant must provide reasonable cost estimates based on plausible assumptions and forecasts, and estimates that ''rely on assumptions seriously at odds with governing realities'' will not be acceptable. *Seabrook,* CLI-99-6, 49 NRC at 222. In addition, to succeed on the merits of a contention challenging that financial assurance, an intervenor must demonstrate that ''relevant uncertainties significantly greater than those that usually cloud business outlooks'' exist. *See id.* The presiding officer will not entertain what amounts to an intervenor request for a ''formalistic redraft'' of the applicant plan with new cost estimates, but rather is concerned as to whether the intervenor demonstrates there are ''gross discrepancies'' in those estimates. *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 259, 260 (1996).

FINANCIAL QUALIFICATIONS: INDEPENDENT SPENT FUEL STORAGE INSTALLATION (COST ESTIMATE PRECISION)

The level of precision required in the accuracy of an applicant's cost estimates does not require that the applicant await actual contract ''bid'' information before preparing its cost estimates for Part 72 financial assurance purposes.

FINANCIAL QUALIFICATIONS: INDEPENDENT SPENT FUEL STORAGE INSTALLATION (INSURANCE REQUIREMENTS)

NRC regulations require operating reactor licensees to ''take reasonable steps to obtain insurance available at reasonable costs and on reasonable terms from private sources.'' 10 C.F.R. § 50.54(w). Part 50 further mandates that reactor licensees maintain a minimum coverage of $1.06 billion, or the amount generally available from private sources, whichever is less. *See id.* § 50.54(w)(1). By contrast, there is no similar requirement under Part 72 for ISFSI licensees to procure insurance. Therefore, the amount of insurance an ISFSI applicant must obtain is to be determined at hearing and included as a condition on its ISFSI license. *See* CLI-00-13, 52 NRC at 36.

FINANCIAL QUALIFICATIONS: INDEPENDENT SPENT FUEL STORAGE INSTALLATION (PRECONSTRUCTION COSTS AS ELEMENT OF COST ESTIMATE)

Preconstruction costs are outside the scope of the financial assurance regulations and, accordingly, any contentions related to those regulations. Part 50 of 10 C.F.R. specifically allows an applicant to engage in preconstruction activities such as site exploration and the procurement or manufacture of facility components before obtaining a construction permit. *See* 10 C.F.R. § 50.10(c)(1), (2). In addition, the Part 72 regulation that requires an applicant to demonstrate reasonable financial assurance refers only to ''construction costs,'' and not to ''preconstruction costs.'' *See id.* § 72.22(e). Therefore, an applicant for a Part 72 license need not include preconstruction costs in its cost estimates.

LICENSE CONDITIONS: MEMORIALIZING HEARING PROCESS STATEMENTS OR COMMITMENTS

Certain statements and commitments made by an applicant under oath and/or on the record during a hearing process need not be memorialized as license conditions to be the subject of future Staff enforcement.

ADJUDICATORY BOARDS: AUTHORITY OVER STAFF ACTION

LICENSING BOARDS: REVIEW OF NRC STAFF ACTIONS

The adequacy of the Staff's safety review is not relevant to the issue of whether a license application should be approved. *See Curators of the University of Missouri* (TRUMP-S Project), CLI-95-1, 41 NRC 71, 121 (1995). Because it is the applicant, rather than the Staff, that bears the burden of proof with respect

to safety issues, ''in adjudications, the issue for decision is not whether the Staff performed well, but whether the license application raises health and safety concerns.'' *Id.,* CLI-95-8, 41 NRC 386, 396 (1995).

FINANCIAL QUALIFICATIONS: INDEPENDENT SPENT FUEL STORAGE INSTALLATION (COST ESTIMATE DURATION)

Section 72.22(e) requires an applicant to demonstrate reasonable assurance of securing sufficient funds to cover the ''[e]stimated operating costs over *the planned life of the ISFSI.*'' 10 C.F.R. § 72.22(e) (emphasis added). Therefore, NRC regulations permit an ISFSI applicant to submit estimates based on the 40-year anticipated term of the facility, rather than being limited to the initial 20-year license period.

LICENSE CONDITIONS: MEMORIALIZING HEARING PROCESS STATEMENTS OR COMMITMENTS

Statements and commitments made during the hearing process, including those of the NRC Staff, need not be memorialized as license conditions to be enforceable.

FINANCIAL QUALIFICATIONS: INSURANCE REQUIREMENTS

Under NRC regulations, operating reactors are not required to retain the maximum amount of insurance coverage available without regard to the accompanying terms and conditions. Pursuant to 10 C.F.R. § 50.54(w), reactor licensees are required to ''take reasonable steps to obtain insurance available at reasonable costs and on reasonable terms from private sources'' and must maintain ''a minimum coverage limit for each reactor station site of either $1.06 billion or whatever amount of insurance is generally available from private sources, whichever is less.'' Thus, the regulations neither mandate a specific amount of coverage nor demand the maximum amount of coverage available under any circumstance, but rather provide licensees with some degree of flexibility in demonstrating compliance with the NRC's insurance requirements. Moreover, current NRC regulations do not require licensees of ISFSIs to obtain onsite property insurance.

TECHNICAL ISSUE(S) DISCUSSED

The following technical issues are discussed: financial qualifications (independent spent fuel storage installation, insurance requirements, construction cost estimates, operating and maintenance cost estimates.

TABLE OF CONTENTS

I. INTRODUCTION 256

II. PROCEDURAL BACKGROUND 256

III. PARTIES' POSITIONS ON CONTENTION UTAH E/CONFEDERATED TRIBES F 266

A. Witness Qualifications 267

1. PFS Witnesses Gase, Takacs, Kapitz, Pickerl, and Parkyn 267

a. Construction Costs 267

b. Operating and Maintenance Costs 269

c. Onsite Property Insurance 269

2. Staff Witnesses McKeigney and Wood 270

3. State Witness Sheehan 271

B. Applicable Legal Standards 272

1. Cost Estimates 272

2. Onsite Property Insurance 273

C. General Standards That Apply to PFS's Cost Estimates 273

1. Project Definition and Quality of the Data 274

2. Accountability of All Costs 275

D. Construction Cost Estimates 276

1. Inadequate Scope 276

2. Uncertain Seismic Qualification Costs 277

3. Estimates Unreliably Based on Preliminary Information 277

4. Breached or Defective Canisters at PFSF 278

5. Rail Equipment 279

6. Cask Transfer Systems 280

7. Interest During Construction 280

8. Contingencies 281

9. Additional License Conditions 281

10. Staff Review of Construction Costs 282

E. Operating and Maintenance Costs 283

1. Scope of O&M Costs 283

2. Relationship of Costs to the License Conditions 284

3. Unsupported Cost Estimates 285

4. Assumptions 285

5. Uncertainties 285

a. Capacity and Quantity of Stored Fuel 285

b. Canisters and Casks 286

c. Transportation Costs 287

d. Interest Payments 288
6. Omitted/Underestimated Costs 288
a. Passthrough Costs 289
b. Debt Financing 289
c. Transportation Costs 290
d. Host Payments 291
e. Castle Rock **x x x x x x x x** 291
f. Bureau of Indian Affairs Bonds 292
g. Skull Valley Band Bonds 292
7. Staff Review of O&M Costs 293
8. License Conditions 293
F. Insurance 293

IV. FACTUAL FINDINGS AND LEGAL CONCLUSIONS 295
A. Findings Regarding the PFS Application and Proposed ISFSI Facility 295
B. Findings and Conclusions Regarding the Parties' Witnesses . . . 295
C. Findings and Conclusions Regarding Applicable Legal Standards 297
1. Construction and Operating Cost Estimates 297
2. Onsite Property Insurance Coverage 299
3. Impacts of CLI-00-13 300
D. Findings and Conclusions Regarding General Standards That Apply to PFS Cost Estimates 300
1. Project Planning Deficiencies as Affecting Cost Estimates 300
2. Passthrough Costs 301
E. Findings and Conclusions Regarding Construction Cost Estimates 302
1. Total Construction Costs 302
2. PFS Methodology 302
3. State Concerns 305
a. Canister Transfer Building and Crane Seismic Qualification Costs 305
b. Building Estimates Based on Preliminary Information 305
c. Rail Equipment 306
d. Cask Transfer Systems 307
e. Omitted Construction Costs 308
(i) Design Drawings 308
(ii) Capital Renewal Costs 309

(iii) Breached or Defective Canister Overpacks 309
(iv) Interest During Construction 310
f. Contingencies 311
g. Additional License Conditions 311
h. Staff Review of Construction Cost Estimates 312
4. Summary of Construction Cost Estimates 313
F. Findings and Conclusions Regarding Operating and Maintenance Cost Estimates 313
1. Total Estimated O&M Costs 313
2. State Concerns 315
a. Scope of O&M Costs 315
b. Relationship of Costs to the License Conditions 315
c. Unsupported Cost Estimates 316
d. Assumptions 316
e. Transportation Costs 316
f. Costs for Construction Loans 318
g. Host Payments 318
h. Castle Rock **x x x x x x x x** 319
i. BIA Bond 319
j. Skull Valley Band Bond and Insurance 319
k. Staff Review of O&M Costs 320
l. Additional License Condition 320
3. Summary of O&M Cost Estimates 321
G. Findings and Conclusions Regarding Onsite Property Insurance Coverage 321
1. Scope of PFS Nuclear Property Insurance Coverage 321
a. Property Covered by PFS's Insurance Policy 321
b. Causes of Loss Covered by PFS Policy 322
2. Maximum Amount and Cost of Coverage Available to PFS 322
3. Adequacy of Coverage and PFS Commitments to Obtain Coverage 323
4. Summary of Onsite Property Insurance Coverage Findings 324
V. SUMMARY FINDINGS OF FACT AND CONCLUSIONS OF LAW 325

PARTIAL INITIAL DECISION
(Contention Utah E/Confederated Tribes F, Financial Assurance)

[*Note:* Although this Partial Initial Decision was originally issued in May 2003, it was treated as a nonpublic issuance pending review of challenges by Intervenor State of Utah to claims by Applicant Private Fuel Storage, L.L.C., that pursuant to 10 C.F.R. § 2.790 certain portions of the Decision should be withheld from public disclosure as proprietary information. With issuance of the Commission's final decision on that matter, *see* CLI-05-16, 62 NRC 56 (2005), this Decision is being publicly released in a redacted form.]

I. INTRODUCTION

1.1 In June 1997, Private Fuel Storage, L.L.C. (PFS), submitted an application to the Nuclear Regulatory Commission (NRC) requesting a license under 10 C.F.R. Part 72 to construct and operate an independent spent fuel storage installation (ISFSI) on the Skull Valley, Utah reservation of the Skull Valley Band of Goshute Indians (Skull Valley Band). The ISFSI proposed in that application is designed to store temporarily up to 40,000 metric tons uranium (MTU) of spent nuclear fuel (SNF) generated by commercial nuclear power reactors in an aboveground dry cask storage facility until a permanent SNF storage facility becomes available. This Partial Initial Decision presents the Licensing Board's findings of fact and conclusions of law relative to portions of admitted contention Utah E/Confederated Tribes F, Financial Assurance, contesting PFS's financial qualifications to construct and operate the ISFSI. Specifically, it concerns subparts 5, 6, and 10 of the contention as they challenge the adequacy of (1) PFS's construction and operating and maintenance (O&M) cost estimates, and (2) the amount of onsite property insurance coverage PFS intends to obtain.

1.2 For the reasons set forth below, the Board finds that PFS has carried its burden of proof to demonstrate its financial qualifications in accordance with 10 C.F.R. § 72.22(e) to safely construct and operate the proposed Skull Valley storage facility. Therefore, the Board concludes that the contention Utah E/Confederated Tribes F challenge to the PFS license application cannot be sustained.

II. PROCEDURAL BACKGROUND

2.1 Following the June 1997 filing of the PFS application for a 20-year license for the proposed ISFSI facility in Skull Valley, Utah, the NRC published a notice of opportunity for a hearing on July 31, 1997. *See* 62 Fed. Reg. 41,099 (July 31, 1997). In response to the published notice, several entities, including

the State of Utah (State) and the Confederated Tribes of the Goshute Reservation (Confederated Tribes), filed hearing requests/petitions to intervene pursuant to 10 C.F.R. § 2.714 seeking to participate as parties in any proceeding concerning the PFS license application. *See* [State] Request for Hearing and Petition for Leave To Intervene (Sept. 11, 1997); Request for Hearing and Petition To Intervene of the [Confederated Tribes] (Aug. 29, 1997). Acknowledging these intervention requests, the Board issued an initial prehearing order on September 23, 1997, establishing an October 24, 1997 deadline for the submission of supplements to the hearing/intervention requests, including the filing of contentions and their supporting bases. *See* Licensing Board Memorandum and Order (Initial Prehearing Order) (Sept. 23, 1997) at 2-3 (unpublished). The Board later issued a series of orders that provided a 30-day extension of this filing period and set dates for a site visit and prehearing conference for the week of January 26, 1998. *See* Licensing Board Memorandum and Order (Schedule for Prehearing Conference/Site Visit and Responses to Supplemental Petition) (Oct. 24, 1997) at 1 (unpublished); Licensing Board Memorandum and Order (Ruling on Motions To Suspend Proceeding and for Extension of Time To File Contentions (Oct. 17, 1997) at 11 (unpublished). Thereafter, the State and the Confederated Tribes separately filed their supplemental petitions, which included contentions Utah E and Confederated Tribes F, to which PFS and the NRC Staff subsequently filed timely responses. *See* [State] Contentions on the Construction and Operating License Application by [PFS] for an [ISFSI] (Nov. 23, 1997) at 27-38; Supplemental Memorandum in Support of the Petition of [the Confederated Tribes] To Intervene and for a Hearing (Oct. 15, 1997); Statement of Contentions on Behalf of [the Confederated Tribes] (Nov. 24, 1997) at 8-9; [PFS] Answer to Petitioners' Contentions (Dec. 24, 1997) at 69-83, 662-71; [PFS] Answer to [Confederated Tribes] Supplemental Memorandum in Support of Petition To Intervene and for a Hearing (Dec. 12, 1997); NRC Staff's Response to Contentions Filed by (1) [State], (2) Skull Valley Band, (3) Ohngo Gaudadeh Devia, (4) Castle Rock Land and Livestock L.C. [et al.], and (5) [Confederated Tribes] (Dec. 24, 1997) at 26-27, 32-33; NRC Staff's Response to the Supplemental Memorandum Filed by [Confederated Tribes] in Support of Their Petition To Intervene (Dec. 23, 1997).

2.2 Following a January 1998 visit to the PFS site and other potentially relevant areas in Tooele County, Utah, the Board conducted a 3-day prehearing conference in Salt Lake City, Utah, during which it heard participant arguments regarding standing to intervene and the admissibility of submitted contentions. In its subsequent ruling, the Board found that the State and the Confederated Tribes had established their standing to intervene in the proceeding and admitted

contentions Utah E and Confederated Tribes F.[1] *See* LBP-98-7, 47 NRC at 187, 236. Because of their similarity, the two contentions were consolidated into a single contention for litigation, and the Board designated the State as the lead intervenor for contention Utah E/Confederated Tribes F.[2] *See* Licensing Board Memorandum and Order (Memorializing Prehearing Conference Rulings) (May 20, 1998) at 2 (unpublished). As admitted in LBP-98-7, consolidated contention Utah E/Confederated Tribes F provides as follows:

> Contrary to the requirements of 10 C.F.R. §§ 72.22(e) and 72.40(a)(6), the Applicant has failed to demonstrate that it is financially qualified to engage in the Part 72 activities for which it seeks a license in that:
>
> 1. The information in the application about the legal and financial relationship among the owners of the limited liability company (i.e., the license Applicant PFS) is deficient because the owners are not explicitly identified, nor are their relationships discussed. *See* 10 C.F.R. §§ 50.33(c)(2) and 50.33(f) and Appendix C, § II of 10 C.F.R. Part 50.
>
> 2. PFS is a limited liability company with no known assets; because PFS is a limited liability company, absent express agreements to the contrary, PFS's members are not individually liable for the costs of the proposed [PFS facility (PFSF)], and PFS's members are not required to advance equity contributions. PFS has not produced any documents evidencing its members' obligations, and thus, has failed to show that it has a sufficient financial base to assume all obligations, known and unknown, incident to ownership and operation of the PFSF; also, PFS may be subject to termination prior to expiration of the license.
>
> 3. The application fails to provide enough detail concerning the limited liability company agreement between PFS's members, the business plans of PFS, and the other documents relevant to assessing the financial strength of PFS. The Applicant must submit a copy of each member's Subscription Agreement, *see* 10 C.F.R. Part 50, App. C., § II, and must document its funding sources.

---

[1] In addition to the tribe itself, Confederated Tribes' Business Council Chairman David Pete also sought party status, which the Board declined to grant because of his failure to establish his standing. *See* LBP-98-7, 47 NRC 142, 170-71, *aff'd on other grounds,* CLI-98-13, 48 NRC 26 (1998).

[2] Petitioners Castle Rock Land and Livestock, L.C., Skull Valley Co., Ltd., and Ensign Ranches of Utah, L.C. (hereinafter referred to collectively as Castle Rock), were also admitted as a parties to the proceeding. *See* LBP-98-7, 47 NRC at 169. Although their contention Castle Rock 7 dealing with financial qualifications was also admitted and consolidated with portions of Utah E and Confederated Tribes F, *see id.* at 214-15, the Board removed the reference to Castle Rock 7 from the consolidated contention's designation after Castle Rock withdrew from the proceeding, *see* LBP-99-6, 49 NRC 114, 119-20 (1999).

4. To demonstrate its financial qualifications, the Applicant must submit as part of the license application a current statement of assets, liabilities and capital structure, *see* 10 C.F.R. Part 50, Appendix C, § II.

5. The Applicant does not take into account the difficulty of allocating financial responsibility and liability among the owners of the spent fuel nor does it address its financial responsibility as the ''possessor'' of the spent fuel casks. The Applicant must address these issues. *See* 10 C.F.R. § 72.22(e).

6. The Applicant has failed to show that it has the necessary funds to cover the estimated costs of construction and operation of the proposed ISFSI because its cost estimates are vague, generalized, and understated. *See* 10 C.F.R. Part 50, App. C, § II.

7. The Applicant must document an existing market for the storage of spent nuclear fuel and the commitment of [a] sufficient number of Service Agreements to fully fund construction of the proposed ISFSI. The Applicant has not shown that the commitment of 15,000 MTUs is sufficient to fund the Facility including operation, decommissioning and contingencies.

8. Debt financing is not a viable option for showing PFS has reasonable assurance of obtaining the necessary funds to finance construction costs until a minimum value of service agreements is committed and supporting documentation, including service agreements, are provided.

9. The application does not address funding contingencies to cover on-going operations and maintenance costs in the event an entity storing spent fuel at the proposed ISFSI breaches the service agreement, becomes insolvent, or otherwise does not continue making payments to the proposed PFSF.

10. The Application does not provide assurance that PFS will have sufficient resources to cover non-routine expenses, including without limitation the costs of a worst case accident in transportation, storage, or disposal of the spent fuel.

LBP-98-7, 47 NRC at 251-52. The Board then published a notice of hearing recognizing that the State and other participants had established standing and had submitted litigable contentions that entitled them to party status in this proceeding. *See* 63 Fed. Reg. 23,476 (Apr. 29, 1998). Thereafter, the parties conducted discovery on this and other contentions in accordance with a Board-established schedule and procedures. *See* Licensing Board Memorandum and Order (General Schedule for Proceeding and Associated Guidance) (June 29, 1998) at 5-8 & Attach. A (unpublished).

2.3 PFS subsequently filed a motion on December 3, 1999, requesting summary disposition on all subparts of contention Utah E/Confederated Tribes F, except subpart 6. *See* [PFS] Motion for Partial Summary Disposition of Utah Contention E and Confederated Tribes Contention F (Dec. 3, 1999) at 3

[hereinafter PFS Motion]. The State opposed the motion. *See* [State] Response to the [PFS] Motion for Partial Summary Disposition of Utah E/Confederated Tribes Contention F (Dec. 27, 1999) at 3-14. Although the Staff supported the PFS motion, *see* NRC Staff's Response to [PFS] Motion for Partial Summary Disposition of Utah Contention E and Confederated Tribes Contention F (Dec. 22, 1999) at 4-5 [hereinafter Staff Response], in its safety evaluation report (SER) for the PFSF, the Staff proposed the following two license conditions to implement commitments made by PFS Chairman John Parkyn:[3]

> ''A. Construction of the [PFS] Facility shall not commence before funding (equity, revenue, and debt) is fully committed that is adequate to construct a Facility with the initial capacity as specified by PFS to the NRC [**x x x x x x x x x x** capacity]. Construction of any additional capacity beyond this initial capacity amount shall commence only after funding is fully committed that is adequate to construct such additional capacity.
>
> B. PFS shall not proceed with the Facility's operation unless it has in place long-term Service Agreements with prices sufficient to cover the operating, maintenance, and decommissioning costs of the Facility, for the entire term of the Service Agreements.''

LBP-00-6, 51 NRC 101, 109 (2000) (quoting Staff Response at 7).

2.4 In a February 2, 2000 order, the Board issued a revised schedule that established June 19, 2000, as the beginning of an evidentiary hearing on contention Utah E/Confederated Tribes F, as well as contentions Utah R, Emergency Plan, and Utah S, Decommissioning. *See* Licensing Board Order (General Schedule Revision and Other Matters) (Feb. 2, 2000) Attach. A (unpublished).

2.5 In granting in part and denying in part the December 1999 PFS motion for summary disposition, the Board determined in a March 10, 2000 order that in accordance with the Commission's decision in *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294 (1997), license conditions, such as those proposed by the Staff, could appropriately be used to establish compliance with the financial assurance requirements of 10 C.F.R. § 72.22(e). *See* LBP-00-6, 51 NRC at 113-17. The Board subsequently dismissed subparts 1 through 5 and 7 through 10, with the exception of those aspects of subparts 5 and 10 relating to onsite property insurance. *See id.* at 137. Thus, after the Board's March 10, 2000 ruling, the only issues remaining open for litigation were (1) the adequacy of PFS's onsite property insurance coverage; and

---

[3] *See* PFS Motion, Decl. of John Parkyn (Dec. 2, 1999) at 2 (quoting Letter from John Parkyn, Chairman, PFS, to Director, NRC Office of Nuclear Materials Safety and Safeguards (Sept. 15, 1998), Attach. B, Private Fuel Storage Facility License Application Requests for Additional Information No. 1, Question 1-1, at 2 of 2).

(2) because PFS did not seek summary disposition of subpart 6, the adequacy of its construction and operating cost estimates. Pursuant to 10 C.F.R. § 2.730(f), the Board also referred its ruling concerning its application of the Commission's *Claiborne* analysis to Part 72 proceedings to the Commission. *See id.* at 136. On that same date, the Board issued a separate order denying a State request to admit three late-filed bases for contention Utah E/Confederated Tribes F in which the Board found that the late-filed bases fell short of the specificity and basis requirements of section 2.714(b)(2). *See* LBP-00-7, 51 NRC 139, 144 (2000).

2.6 Shortly thereafter, in a March 24, 2000 order, the Board denied a State motion to delay the scheduled June 2000 evidentiary hearing pending a Commission ruling on the Board's referral. *See* Licensing Board Memorandum and Order (Denying Motion To Delay Hearing Schedule and Requesting Scheduling Information) (Mar. 24, 2000) at 1-2 (unpublished). On April 19, 2000, the Board issued a notice of hearing relative to this evidentiary proceeding along with a notice of opportunity to make oral or written limited appearance statements. *See* 65 Fed. Reg. 24,230 (Apr. 25, 2000), as revised, 65 Fed. Reg. 37,184 (June 13, 2000). During the evidentiary hearings held in Salt Lake City, Utah, a total of eight witnesses testified on behalf of PFS, the Staff, and the State regarding contention Utah E/Confederated Tribes F on June 20-22, 2000, and on June 27, 2000. *See* Tr. at 1673-2413, 2556-2681.

2.7 Following the evidentiary hearing, PFS, the State, and the Staff each timely filed their proposed findings of fact and conclusions of law on July 31, 2000. *See* [PFS] Proposed Findings of Fact and Conclusions of Law on Contentions Utah E/Confederated Tribes F and Utah S (July 31, 2000) [hereinafter PFS Findings]; [State] Proposed Findings of Fact and Conclusions of Law Regarding Contention Utah E (July 31, 2000) [hereinafter State Findings]; NRC Staff's Proposed Findings of Fact and Conclusions of Law Concerning Contention Utah E/Confederated Tribes F (Financial Qualifications) (July 31, 2000) [hereinafter Staff Findings]. The next day, however, the Commission ruled on the Board's March 2000 interlocutory referral of its summary disposition order relative to contention Utah E/Confederated Tribes F. *See* CLI-00-13, 52 NRC 23 (2000), *aff'g in part and rev'g in part,* LBP-00-6, 51 NRC 101 (2000). In that decision, accepting the Board's referral, the Commission found the Staff-proposed conditions acceptable and, indeed, directed that a number of the PFS commitments upon which the Board relied be incorporated as license conditions (LCs) as well. *See* CLI-00-13, 52 NRC at 32. As set forth by the Commission, *id.* at 27, 32, 36, the license conditions that the Staff is to make applicable to the PFS

facility, based on promises made by PFS during the licensing process, are as follows:[4]

> [LC-1. PFS shall] not commence construction before funding, in the amount to be determined at hearing, is adequately committed;
>
> [LC-2. PFS shall] not commence operations before service agreements for the life of the license, with prices adequate to fund operations, maintenance, and decommissioning, in the amount to be determined at hearing, are in place;[5]
>
> [LC-3. PFS shall] include provisions in service agreements requiring customers to retain title to the spent fuel stored and allocating liability among PFS and the customers;
>
> [LC-4. PFS shall] include provisions in the Service Agreements requiring customers to provide periodically credit information, and, where necessary, additional financial assurances such as guarantees, prepayment, or payment bond;
>
> [LC-5. PFS shall] include in the customer service agreements a provision requiring PFS not to terminate its license prior to furnishing the spent fuel storage services covered by the service agreement;
>
> [LC-6. PFS shall] obtain insurance for offsite liability in the amount of $200 million (the maximum amount commercially available); and
>
> [LC-7. PFS shall] obtain insurance covering onsite liability in an amount to be determined at hearing.

The Commission, however, did not agree with the Board's determination that PFS commitments relative to its service agreements provided a sufficient basis for a reasonable assurance finding based on post-licensing Staff inquiry. According to the Commission, without even a draft of the proposed service agreements, there was no basis for determining ''within acceptable bounds, what the agreements' terms will be, how inviolate their provisions will be, and how easy it will be for

---

[4] As the Board noted in LBP-00-6, 51 NRC at 137, the initial LCs were designated by the Staff as LC17-1 and LC17-2 based on nomenclature that tied proposed license condition numbering to the section of its December 15, 1999 PFSF SER to which the condition related, e.g., SER section 17 concerning financial qualifications and decommissioning funding assurance. In this instance, for ease of reference we adopt the same numbering order as the Commission outlined in CLI-00-13, albeit noting that when actually incorporated into any PFS license these conditions may well be numbered differently.

[5] In CLI-00-13, 52 NRC at 32, relative to this license condition the Commission declared that

> proposed license condition LC 17-2 should be revised to read as follows: ''PFS shall not proceed with the Facility's operation unless it has in place Service Agreements covering the entire term of the license, with prices sufficient to cover the operating, maintenance, and decommissioning costs of the Facility for the entire term of the license.''

NRC verification reviews to determine compliance.'' *Id.* at 34. Consequently, the Commission directed that

> the Board (1) require PFS to produce a sample service contract that meets all financial assurance license conditions, and (2) give Intervenors an opportunity to address the adequacy of the service contract to meet the concerns raised in Contention E. If Intervenors do not raise further objections after reviewing the sample contract, or if the Board finds [I]ntervenors' objections insubstantial, then PFS would be entitled to summary disposition on Utah Contention E. Otherwise, the contention should be set for hearing.

Id. at 35.

2.8 In light of the possible impact of the Commission's decision on the pending financial assurance issues, on August 4, 2000, the Board ordered the parties to submit a discussion of the effect of CLI-00-13 on the PFS proceeding with regard to the pending determinations on contentions Utah E/Confederated Tribes F and Utah S, which was due at the same time as their proposed finding responses. *See* Licensing Board Order (Scheduling/Administrative Matters) (Aug. 4, 2000) at 2 (unpublished). In the same order, the Board also directed the parties to provide the Board with a joint report outlining a schedule for (1) the submission by PFS of a sample service contract; and (2) an opportunity for the State to address the adequacy of the sample service contract that provides for further summary disposition filings relating to this contention. *See id.* at 1. The parties responded to the Board's directive by filing a joint report proposing a tentative schedule subject to the finalization of the sample service agreement by PFS. *See* Joint Report on the Schedule for the Applicant's Provision of a Sample Service Agreement and Opportunity for the [State] to Address its Adequacy (Aug. 14, 2000) at 2. The Board subsequently issued an order directing PFS to submit its sample service agreement to the Board and the other parties by September 29, 2000. *See* Licensing Board Order (Schedule for Submission of Sample Service Agreement) (Aug. 16, 2000) at 1-2 (unpublished).

2.9 On August 28, 2000, PFS, the State, and the Staff each filed responses to the other parties' proposed findings of fact and conclusions of law.[6] *See* [PFS]

---

[6] Also in connection with the evidentiary record of this proceeding, on September 15, 2000, the parties submitted to the Board two joint filings that (1) proposed corrections to the evidentiary hearing transcript concerning contention Utah E/Confederated Tribes F, *see* Joint Corrections to the Transcript of the Evidentiary Hearing (Sept. 15, 2000); and (2) identified those portions of the evidentiary hearing transcript, prefiled testimony, and exhibits which they agreed could be placed on the public record, *see* Joint Filing of the Parties on Portions of the Hearing Transcripts, Pre-Filed Testimony, and Exhibits Concerning Utah E That Can Be Placed on the Public Record (Sept. 15, 2000). In a separate filing on the same date, the State requested the public disclosure of additional evidentiary

(Continued)

Reply to the Proposed Findings of Fact and Conclusions of Law of the [State] and the NRC Staff on Contentions Utah E/Confederated Tribes F, Utah R, and Utah S (Aug. 28, 2000) [hereinafter PFS Reply]; [State] Proposed Response to Findings of Fact and Conclusions of Law Relating to Contentions Utah E/Confederated Tribes F (Aug. 28, 2000) [hereinafter State Reply]; NRC Staff's Proposed Findings in Reply to the [State] Proposed Findings Concerning Contentions Utah S and Utah E/Confederated Tribes F (Aug. 28, 2000) [hereinafter Staff Reply]. Relative to the impact of CLI-00-13 on the pending proceeding, PFS and the Staff elected to provide their discussions on the financial qualifications issues in their responses to the other parties' proposed findings, *see* PFS Reply at 3-4; Staff Reply at 39-41, while the State submitted its discussion as a separate document, *see* [State] Discussion of the Impact of CLI-00-13 on Proposed Findings of Fact and Conclusions of Law Relating to Contentions Utah E/Confederated Tribes F and Utah S (Aug. 28, 2000) [hereinafter State Discussion]. In its filing, the State argued that the Board should interpret CLI-00-13 to require promises made by PFS to be formulated into license conditions and to require PFS to submit a sample service agreement containing the appropriate provisions to the Board and the parties. *See id.* at 1. Subsequently, when the Board afforded all the parties an opportunity to respond to the other parties' views regarding the impact of CLI-00-13, *see* Licensing Board Order (Granting Motion for Leave To File Reply and Permitting Additional Filings on Impact of CLI-00-13 (Sept. 1, 2000) (unpublished), PFS and the Staff addressed, among other things, the State's assertions regarding the application of CLI-00-13 to contention Utah E/Confederated Tribes F, *see* [PFS] Response to the [State] and NRC Staff's Filings Regarding the Impact of Commission Decision CLI-00-13 (Sept. 11, 2000) at 3-7; NRC Staff's Response

---

material, including (1) the methodologies and assumptions that PFS used to arrive at its cost estimates, including the planned capacities for the three phases of the ISFSI; (2) the total bottom-line construction costs for each of the three planned construction phases; (3) references to the fact PFS intends to pass through costs to its customers under the service agreements; and (4) the maximum amount of property insurance (**x x x x x x x x x x x x**) currently available to PFS at reasonable terms and costs. *See* [State] Request To Disclose Evidentiary Material Relating to the Hearing on Contention Utah E/Confederated Tribes F and Request To Reply (Sept. 15, 2000) at 4-6. Pursuant to a September 18, 2000 Board order, *see* Licensing Board Order (Schedule for Responses to Petition and to Evidentiary Material Disclosure Request) (Sept. 18, 2000) at 2, PFS responded to the State's request by arguing that, with the exception of the Phase II and Phase III capacities, the information it sought to keep confidential was proprietary commercial or financial information protected from public disclosure under 10 C.F.R. § 2.790, *see* [PFS] Response to [State] Request To Disclose Evidentiary Material Relating to the Hearing on Contention Utah E/Confederated Tribes F and Request To Reply (Sept. 25, 2000) at 2. For its part, the Staff did not oppose PFS's efforts to protect certain confidential commercial and financial information, while at the same time, it expressed no opinion on the disputes that had arisen between PFS and the State over the disclosure of specific documents. *See* NRC Staff's Reply to ''[PFS] Response to [State] Request To Disclose Evidentiary Material Relating to the Hearing on Contention Utah E/Confederated Tribes F and Request to Reply'' (Oct. 11, 2000) at 1.

to the [State] Comments Concerning the Impacts of CLI-00-13 (Sept. 11, 2000) at 4-9.

2.10 On September 29, 2000, PFS filed its Model Service Agreement (MSA) with the Board, along with a summary of the relevant financial provisions and a request that the sensitive proprietary commercial and financial information contained in the MSA remain confidential. *See* [PFS] Submission of [MSA] (Sept. 29, 2000). Responding to an October 3, 2000 Board order, *see* Licensing Board Memorandum and Order (Request for Additional Information) (Oct. 3, 2000) at 1-2 (unpublished), PFS supplemented its September 29, 2000 submission by identifying additional provisions in the MSA whose terms differed from previous PFS representations, *see* [PFS] Identification of Additional MSA Provisions That Embody Changes from Previous PFS Representations (Oct. 17, 2000). Thereafter, the State filed a motion to reopen the hearing record on contention Utah E/Confederated Tribes F for the purposes of conducting discovery and hearing regarding the impacts of the MSA on PFS's construction and operation cost estimates and insurance coverage. *See* [State] Motion To Re-open the Hearing Record on Contention Utah E (Nov. 7, 2000) at 1. In a separate filing also dated November 7, 2000, the State submitted its objections to the adequacy of the PFS MSA to satisfy the concerns raised in contention Utah E/Confederated Tribes F. *See* [State] Objections to the Adequacy of the [PFS MSA] To Meet Part 72 Financial Assurance Requirements (Nov. 7, 2000) at 1. In their responses to the State's motion to reopen the hearing record, both PFS and the Staff argued that the Board should deny the State's request. *See* [PFS] Response to [State] Motion To Re-open the Hearing Record for Contention Utah E (Nov. 21, 2000) at 1-2; NRC Staff's Response to ''[State's] Motion To Re-open the Hearing Record on Contention Utah E'' (Nov. 21, 2000) at 1.

2.11 Thereafter, on December 4, 2000, PFS filed a motion for summary disposition on the issues that were remanded in CLI-00-13, asserting that because the MSA implements the financial assurance license conditions prescribed by the Commission's decision, no genuine issue as to any material fact relevant to the issues remanded by the Commission existed.[7] *See* [PFS] Motion for Summary Disposition on Issues Remanded by CLI-00-13 on Utah Contention E and Confederated Tribes Contention F and Response to [State's] Objections to the Adequacy of [PFS MSA] To Meet Part 72 Financial Assurance Requirements (Dec. 4, 2000) at 1, 4-8. In its filing, PFS also responded to the State's objections to the adequacy of the MSA to meet the Part 72 financial assurance requirements, *see id.* at 8-25, and provided an updated version of the MSA that incorporated

[7] Although we make reference herein to the MSA and other post-CLI-00-13 filings as appropriate, our principal vehicle for addressing the various matters raised by the parties arising from that Commission remand is a separate decision we issue today. *See* Memorandum and Order of May 27, 2003, LBP-05-20, 62 NRC 187 (2003).

several PFS revisions, *see id.* Parkyn Declaration Exh. 1 (Model Agreement for Storage of Spent Nuclear Fuel by and Between [PFS] and ____ (Dec. 4, 2002)) [hereinafter MSA].[8] While the Staff supported the PFS motion for summary disposition and dismissed the State's objections concerning the MSA, *see* NRC Staff's Response to ''[PFS] Motion for Summary Disposition on Issues Remanded by CLI-00-13 on Utah Contention E and Confederated Tribes Contention F and Response to [State] Objections to the Adequacy of [PFS MSA] To Meet Part 72 Financial Assurance Requirements'' (Dec. 20, 2000) at 1, 4-24, the State opposed the motion, because in its view, there remained genuine issues of material fact concerning the MSA relative to the issues remanded by the Commission, *see* [State] Response to [PFS] Motion for Summary Disposition of Issues Remanded by CLI-00-13 on Utah Contention E/Confederated Tribes Contention F (Dec. 22, 2000) at 1. In a subsequent filing, the State also responded to the Staff's filing in support of PFS's motion. *See* [State] Reply to the NRC Staff's Response to ''[PFS] Motion for Summary Disposition of Issues Remanded by CLI-00-13 on Utah Contention E and Confederated Tribes Contention F and Response to [State] Objections to the Adequacy of [PFS MSA] To Meet Part 72 Financial Assurance Requirements'' (Jan. 5, 2001). Moreover, for its part, PFS filed a motion to strike portions of the State's December 22, 2000 response to its December 4, 2000 motion for summary disposition on the grounds that those portions raised issues that should have been raised when the State filed its November 7, 2000 objections to the MSA and/or those portions were outside the scope of the Commission's remand and, hence, outside the Board's jurisdiction. *See* [PFS] Motion To Strike Portions of [State] Response to [PFS] Motion for Summary Disposition of Issues Remanded by CLI-00-13 on Utah Contention E/Confederated Tribes Contention F (Jan. 5, 2001) at 1. In response to the PFS motion to strike, the State filed a reply on January 16, 2001, urging the Board to deny what it viewed as a meritless PFS request. *See* [State] Response to [PFS] Motion To Strike Portions of the [State] Response to [PFS] Motion for Summary Disposition of Issues Remanded by CLI-00-13 on Utah Contention E/Confederated Tribes F (Jan. 16, 2001) at 1.

III. PARTIES' POSITIONS ON CONTENTION UTAH E/CONFEDERATED TRIBES F

3.1 As noted above, the only subparts of contention Utah E/Confederated Tribes F that remained for litigation at the June 2000 evidentiary hearing were subparts 5 and 10, as they related to onsite property insurance, and subpart 6,

[8] Unless otherwise noted, references in this decision to particular provisions of the MSA are to the version included as Exhibit 1 to the Parkyn Affidavit filed in support of the December 4, 2000 PFS dispositive motion.

concerning PFS's construction and O&M cost estimates. As was also noted previously, evidence bearing on these issues was heard by the Board on June 20-22, 2000, and on June 27, 2000, in Salt Lake City, Utah, during which it received the testimony of eight witnesses. Below, we outline the positions of the parties pertaining to the evidence presented at the hearing.

A. Witness Qualifications

3.2 During the portion of the June 2000 hearing relating to contention Utah E/Confederated Tribes F, PFS presented the testimony of Mr. Joseph Gase and Mr. George Takacs, both of Stone & Webster Engineering Corporation (Stone & Webster), who testified as a panel regarding the PFS construction cost estimates. Mr. John Parkyn, the PFS Board of Managers Chairman, provided additional testimony on construction costs. Testimony on the O&M costs for PFS was provided by a panel comprised of Mr. Parkyn and Mr. Jon Kapitz, a dry cask storage project manager for Northern States Power Company. Mr. Parkyn and Mr. Hanson Pickerl, Senior Vice President of the Midwest Region Marsh Power Group of Marsh USA, Inc., testified individually on behalf of PFS on the subject of onsite property insurance. The Staff presented two witnesses, Dr. Alex McKeigney and Mr. Robert Wood, both of the NRC's Office of Nuclear Reactor Regulation. Dr. McKeigney and Mr. Wood testified on behalf of the Staff regarding construction and O&M costs, as well as onsite property insurance. Dr. Michael Sheehan, who is a partner in the firm Osterberg and Sheehan, Public Utility Economists, was the sole witness presented by the State and testified on all three matters being litigated during the contention Utah E/Confederated Tribes F portion of the hearing.

3.3 An initial controversy among the parties concerns the weight to be given to the testimony of the witnesses, particularly the State's sole witness. Below, we set forth the parties' positions regarding the qualifications of the various witnesses.

1. PFS Witnesses Gase, Takacs, Kapitz, Pickerl, and Parkyn

a. Construction Costs

3.4 Testimony for PFS on the cost of structures and site work for the proposed ISFSI was provided by Stone & Webster employees Mr. Joseph Gase and Mr. George Takacs. In addition, PFS Board Chairman John Parkyn testified on the cost of equipment and administrative costs to be incurred during construction.

3.5 According to the evidence then presented, Mr. Gase has 29 years of experience in the engineering and construction industry, including experience as a construction engineer, cost estimating engineer, and supervisor, all at Stone & Webster, the architect/engineer for the PFS facility. In his current capacity as

Manager of Project Controls and Resource Staffing for Stone & Webster's Denver office, he is responsible for, among other things, enhancing project performance by providing business and financial support, cost and schedule control, and construction estimating services. He earned a bachelor's degree in civil engineering from the Indiana Institute of Technology in 1971. Throughout his career at Stone & Webster, Mr. Gase has participated in and led the estimating efforts on large-scale construction projects. *See* Testimony of Joseph E. Gase and George L Takacs IV on PFS Construction Costs — Contention Utah E/Confederated Tribes F (fol. Tr. at 1681) at 1-2 & attached resume [hereinafter Gase/Takacs Testimony].

3.6 Mr. Takacs has over 25 years of experience in estimating, cost control, and scheduling in the construction industry. As Principal Estimating Engineer in the Cost and Scheduling Department of Stone & Webster's Denver office, Mr. Takacs is responsible for all estimating work in that office and has prepared numerous cost estimates for various power, government, industrial, and process facilities. He received a bachelor's degree from Montana State University in construction engineering technology in 1974. Prior to joining Stone & Webster in 1980, Mr. Takacs was employed by Townsend and Bottum, the Naval Facilities Engineering Command, and Commonwealth Associates. In addition, Mr. Takacs is a member of the American Association of Cost Engineers, and served as vice-chairman of the Association's cost estimating committee. *See id.* at 2-3 & attached resume.

3.7 Mr. Parkyn's experience in the nuclear power industry spans some 30 years. In addition to being the Chairman of the PFS Board of Managers, he serves as Vice President of Genoa Fuel Tech, Chairman and Chief Executive Officer of the Great Salt Lake and Southern Railroad (GSLSR), and a Director of River Bank in La Crosse, Wisconsin. Mr. Parkyn earned a bachelor's degree in nuclear engineering from the University of Wisconsin. He is a licensed Professional Engineer in Wisconsin and a licensed Professional Nuclear Engineer in California. Mr. Parkyn has also served in several professional organizations, including the National Planning Committee for the American Nuclear Society, the Wisconsin Division of the American Nuclear Society, as well as the Evaluation and Review Group for the Institute of Nuclear Power Operations. In connection with the various positions he has held at nuclear power facilities beginning in 1967, Mr. Parkyn was involved in the cost estimation and budgeting relative to the La Crosse Boiling Water Reactor and the Point Beach Nuclear Power Plant, Units 1 and 2, and spent fuel management at the La Crosse reactor. In addition, he has authored many papers on nuclear energy and its implementation. *See* Testimony of John Parkyn of PFSF Construction Costs — Contention Utah E/Confederated Tribes F (fol. Tr. at 1854) at 1-3 & attached resume [hereinafter Parkyn Construction Testimony].

b. Operating and Maintenance Costs

3.8 Testimony for PFS on the proposed ISFSI's O&M costs was provided by a panel of two witnesses, Mr. Jon Kapitz of Northern States Power and PFS Chairman Mr. Parkyn.

3.9 Mr. Kapitz has some 20 years of experience in the nuclear power industry. In his current capacity as Project Manager for Dry Cask Storage at Northern States Power's Prairie Island Nuclear Generating Plant, Mr. Kapitz is responsible for the overall project management of the Prairie Island ISFSI. After earning both a bachelor's degree and a master's degree in nuclear engineering from the University of Wisconsin, Mr. Kapitz began working as a nuclear engineer for Northern States Power in 1981. In addition to being a registered professional engineer in Minnesota, he has completed the Minnesota Management Institute program at the Executive Development Center of the University of Minnesota Carlson School of Management. Mr. Kapitz is also a member of the EPRI Fuel Reliability, Storage, and Disposal Steering Committee, the NEI Dry Cask Storage Issues Task Force, and the American Nuclear Society. *See* Testimony of John Parkyn and Jon Kapitz on the Operation and Maintenance Cost of the PFSF — Contention Utah E/Confederated Tribes F (fol. Tr. at 2017) at 1-2 & attached resume [hereinafter Parkyn/Kapitz O&M Testimony].

3.10 Although Mr. Parkyn's educational and professional qualifications have been discussed above in connection with his testimony on construction costs, relative to O&M cost estimates Mr. Parkyn also possesses experience particular to the operation and maintenance of nuclear facilities. His PFS-pertinent responsibilities at the La Crosse reactor included the costing out of staffing levels, preparation of technical specifications, license amendments, NRC approvals, and other related activities. *See id.* at 4-5.

c. Onsite Property Insurance

3.11 Mr. Hanson Pickerl and Mr. Parkyn testified on behalf of PFS about the cost, availability, and scope of coverage concerning nuclear property insurance for the proposed facility.

3.12 Mr. Pickerl serves as Senior Vice President of the Midwest Region Marsh Power Group, a specialty group within Marsh USA, Inc. He received a bachelor's degree in physics from the U.S. Naval Academy in 1980 and a Master of Business Administration from the University of Chicago in 1989. He has been a member of the Marsh Nuclear professional staff since 1985 and has been responsible for all aspects of nuclear insurance procurement and administration for utility and nuclear industry clients. *See* Testimony of Hanson D. Pickerl on Nuclear Property Insurance for the PFSF — Contention Utah

E/Confederated Tribes F (fol. Tr. at 1757) at 1-2 & attached resume [hereinafter Pickerl Testimony].

3.13 With respect to nuclear insurance, Mr. Parkyn's experience includes knowledge of the requirements for and costs of nuclear insurance for reactors that are operating and undergoing decommissioning. *See* Testimony of John Parkyn on On-site Property Insurance for the PFSF — Contention Utah E/Confederated Tribes F (fol. Tr. at 2173) at 3 [hereinafter Parkyn Insurance Testimony].

3.14 The Staff agrees that each of the witnesses PFS presented should be considered experts in their respective fields. *See* Staff Findings at 9-10. In its proposed findings, the State did not express a view on the qualifications of the witnesses who testified on behalf of PFS.

2. Staff Witnesses McKeigney and Wood

3.15 In support of the adequacy of the PFS license application with respect to contention Utah E/Confederated Tribes F, the Staff introduced a panel of two witnesses, Dr. Alex McKeigney and Mr. Robert Wood. The Staff asserts that these witnesses are well qualified as expert witnesses in the areas of nuclear facility construction, O&M costs, and nuclear facility property insurance. *See* Staff Findings at 11.

3.16 Dr. McKeigney has over 20 years of experience in strategic and financial planning and financial analysis and is currently employed by the NRC as a Financial Analyst in the agency's Office of Nuclear Reactor Regulation. In his capacity as a Financial Analyst, Dr. McKeigney performs a wide range of analytical functions pertaining to NRC regulations in such areas as financial qualifications and decommissioning funding assurance. He holds a bachelor's degree in sociology and economics from the University of Mississippi, a master's and doctoral degree in sociology from the University of North Carolina, and a Master of Business Administration from Harvard Business School. His professional experience includes evaluating the relative feasibility and profitability of alternative corporate strategies and financing plans, comparing options for project financing, and conducting numerous other quantitative analyses and reviews for electric utilities. *See* NRC Staff Testimony of Alex F. McKeigney and Robert S. Wood on Utah Contention E/Confederated Tribes F (Financial Assurance) (fol. Tr. at 2559) at 1-2 & attached resume [McKeigney/Wood Testimony].

3.17 Mr. Wood has some 30 years of experience with the NRC. Currently, Mr. Wood is a Senior Level Licensee Financial Policy Advisor in the agency's Office of Nuclear Reactor Regulation, where he is responsible for, among other things, the development and implementation of NRC policies on and programs for nuclear property and liability insurance, evaluating financial assurance for decommissioning nuclear power facilities, and assessing the financial qualification of NRC licensees. He earned a bachelor's degree in economics from Drew

University in 1968, an M.P.A. degree from Ohio State University in 1971, and has completed doctoral level courses and qualifying exams for a Ph.D. in economics also from Ohio State University. *See id.* at 1-2 & attached resume.

3.18 Neither PFS nor the State expressed an opinion on the expertise of the Staff's proffered witnesses.

3. State Witness Sheehan

3.19 The State presented Dr. Michael Sheehan as its sole witness. Dr. Sheehan is currently a partner in the firm of Osterberg & Sheehan, Public Utility Economists. He holds bachelor's, master's, and doctorate degrees in economics from the University of California at Riverside, as well as a legal degree from the College of Law at the University of Iowa. In addition to having taught graduate level courses at the University of Iowa, he has published a substantial number of articles in scholarly journals and a number of book chapters. Much of Dr. Sheehan's practice over the past 20 years has been involved with utility rate cases, project planning, budgeting, and financial analysis. Specifically, he has worked on municipal valuation cases and projects, rate setting and regulation of local and regional solid waste operations, prevailing wage rates on public projects, and financial studies and analyses with respect to municipal collective bargaining and county planning. Dr. Sheehan has also testified as an expert witness in numerous administrative proceedings, including several before the NRC. *See* Prefiled Testimony of Michael F. Sheehan, Ph.D. on Behalf of the [State] Regarding Contention Utah E (fol. Tr. at 2190) at 1-4 [hereinafter Sheehan Testimony]; State Exh. 9 (Resume of Michael Sheehan).

3.20 Both PFS and the Staff consider Dr. Sheehan to be well qualified as an expert witness in the field of economics. *See* PFS Reply at 4; Staff Findings at 10. PFS asserts, however, that because Dr. Sheehan has no prior experience in estimating construction or operating costs for nuclear facilities or large industrial projects generally, the Board should accord far less weight to his testimony than it would to the testimony of a witness with such experience. *See* PFS Findings at 11; PFS Reply at 4-5. PFS further claims that Dr. Sheehan's testimony should be accorded little weight regarding nuclear insurance markets generally, because nothing in his background, aside from some general academic experience with risk management, establishes any expertise, experience, or particular knowledge in the area of nuclear insurance. *See* PFS Findings at 14; PFS Reply at 5. Moreover, PFS argues, the Board should give no weight at all to Dr. Sheehan's testimony on the effects of potential accidents at the proposed ISFSI, based on his admitted lack of experience in estimating the probabilities or consequences of accidents. *See* PFS Findings at 14; PFS Reply at 5.

B. Applicable Legal Standards

1. Cost Estimates

3.21 Pursuant to 10 C.F.R. § 72.22(e), an ISFSI applicant must submit sufficient information to demonstrate its financial qualifications to carry out the activities for which the license is sought. As relevant to contention Utah E/Confederated Tribes F, the information must show that the applicant either possesses the necessary funds or has reasonable assurance of obtaining them, or by a combination of the two, the applicant will have the necessary funds available to cover the following: (1) estimated construction costs, and (2) estimated operating costs over the planned life of the facility. *See* 10 C.F.R. § 72.22(e).

3.22 Although the parties are in general agreement that the Commission's acknowledgment in *North Atlantic Energy Service Corp.* (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 221 (1999), that cost estimates must be ''reasonable'' is relevant to the instant proceeding, they disagree over the level of precision required in the accuracy of the cost estimates. The State contends that while absolute precision is not required in cost estimates, *see* Tr. at 1720, PFS's cost estimates must nonetheless be ''hard,'' as the term was used by the Commission in its *Claiborne* decision to describe the reliability of cost estimates, CLI-97-15, 46 NRC at 306, or, as interpreted by Dr. Sheehan, ''reasonably firm and precise and not unreasonably unfirm and imprecise.'' Tr. at 2224; *see also* State Reply at 3; Sheehan Testimony at 8; Tr. at 2223-31. PFS and the Staff, however, disagree with the State's interpretation of the term as it appears in the *Claiborne* decision. Both PFS and the Staff assert that the Commission's use of the term ''hard'' appears to describe cost estimates concerning such items as physical structures, as distinguished from ''soft construction costs'' such as interest and financing costs. *See* PFS Findings at 32; Staff Findings at 26. Thus, while PFS recognizes that it must provide reasonable cost estimates to demonstrate reasonable assurance that it will have sufficient funds to construct and operate its proposed facility, *see* PFS Findings at 18; PFS Reply at 7, it argues that ''reasonable assurance'' is not the equivalent of absolute or near certainty, *see* PFS Findings at 19. Moreover, according to the Staff, regardless of how the Board interprets ''hard construction costs,'' the *Claiborne* decision does not mandate any degree of precision in cost estimates. *See* Staff Findings at 26.

3.23 Also in controversy is what an intervenor must establish to negate an applicant's purported showing of financial assurance. Relying on the Commission's *Seabrook* decision, the State argues that an applicant must present estimates based on plausible assumptions and forecasts and, in challenging PFS cost estimates, acknowledged that it bears the burden of doing more than casting doubt on some aspect of the estimates. *See* State Reply at 3. PFS avers, however, that it is not enough for the State merely to cast doubt. Based on the same *Seabrook* decision, PFS argues that the State's challenge will fail unless the State can demonstrate

that ‘‘ ‘relevant uncertainties significantly greater than those that usually cloud business outlooks’ ’’ exist. PFS Findings at 19 (quoting *Seabrook,* CLI-99-6, 49 NRC at 222). For its part, the Staff agrees with PFS that the State’s challenge should be held to a more demanding standard in accordance with *Seabrook. See* Staff Reply at 11.

2. Onsite Property Insurance

3.24 Also at issue is the amount of onsite property insurance coverage PFS must carry for the proposed storage facility. NRC regulations require operating nuclear power reactors to have insurance coverage in the amount of $1.06 billion or the amount generally available from private sources, whichever is less. *See* 10 C.F.R. § 50.54(w). Apparently recognizing that 10 C.F.R. Part 72 does not require applicants to provide onsite property insurance for an ISFSI, the State relies on sections 72.22(e) and 72.40(a)(5) and (6) in asserting that the Commission cannot issue a license to PFS unless it finds that PFS is financially qualified to construct and operate the facility and has adequate operating procedures to protect health and to minimize danger to life or property. *See* State Findings at 48. Thus, the State argues, the adequacy of insurance coverage cannot be left to the business judgment of the Applicant. *See id.* at 48-49. Rather, the State insists only when license conditions requiring a specific amount of insurance coverage are imposed on PFS can the Commission find that PFS is financially qualified to construct and operate the facility and that public health will be protected and danger to life or property minimized. *See id.* at 49. PFS counters that it can provide reasonable assurance that it will be able to cover nonroutine expenses with its commitment to obtain onsite property insurance coverage amounting to the lesser of (1) the amount justified in terms of a reasonable evaluation of the risks to onsite property associated with the proposed ISFSI, or (2) the maximum amount of onsite property coverage available for the proposed ISFSI at reasonable costs and reasonable terms from commercial sources. *See* PFS Findings at 58. While the Staff also acknowledges that ISFSIs are not required to be covered by insurance, it nonetheless considers it appropriate and in accord with sound business practice that PFS should pursue onsite property insurance coverage. *See* Staff Findings at 12. Given that the Commission has not mandated that ISFSI applicants obtain a particular amount of onsite coverage, the Staff finds the PFS proposal to be reasonable. *See* Staff Reply at 38.

C. General Standards That Apply to PFS’s Cost Estimates

3.25 In the State’s view, the principal purpose of the agency’s financial assurance requirements is to ensure that an ISFSI applicant will possess sufficient

funds to build and operate the facility safely, such that it will not be susceptible to economic pressure to ''cut corners'' on safety. *See* State Findings at 9. Further, the State argues, if important details in the project design remain uncertain, such as the ultimate size and capacity of the facility or the timing of the various phases of construction, it will be difficult to arrive at a reasonably accurate estimate of construction and O&M costs. *See id.* at 9, 10. The State alleges that at this point in the planning stages, ''[e]ven a five percent error . . . due to [an] insufficiently specified project design could result in a multi-million dollar shortfall during construction or operation of the ISFSI.'' *Id.* at 9.

3.26 In response, PFS argues that when addressing alleged uncertainties in an applicant's cost estimates, the Board must consider whether the uncertainty is material, i.e., whether it is significant enough to affect the applicant's ability to take precautions necessary to ensure that activities under the license will not create an undue risk to public health and safety. *See* PFS Reply at 8. PFS suggests that a multimillion dollar shortfall, put in the context of a $3 billion project, would not materially affect its ability to take necessary safety measures at the facility. *See id.* at 9. For its part, the Staff maintains that not only is there no evidence in the record to suggest that PFS will incur a 5% error, but that PFS has also factored a 10% contingency into its estimates to accommodate unforeseen expenses. *See* Staff Reply at 12 n.5. Moreover, the Staff finds that PFS has provided a detailed plan regarding what will be built during the three phases of construction and the total costs to construct and operate the facility, and is satisfied that PFS has demonstrated reasonable assurance that it will obtain the necessary funds to cover the estimated costs of construction and operation. *See id.* at 12.

1. Project Definition and Quality of the Data

3.27 The State claims that many of PFS's cost estimates are unreliable because the ISFSI project is still in the preliminary planning stage. *See* State Findings at 10. For example, the State points out that decisions remain to be made on some of the most important and expensive features of the project, such as whether PFS will use the Low rail spur and/or the intermodal transfer facility (ITF) at Rowley Junction for transportation of SNF to the ISFSI. *See id.* In addition, the State contends the ultimate size of the proposed facility, the timing and size of the phases of the project, and the rate of incoming shipments of fuel are still in the preliminary planning state. *See id.* at 11. According to the State, the reliability of PFS's estimates are further undermined because capital costs, such as the acquisition of rail equipment and canisters, are treated at times as construction costs, at other times as O&M costs, and at other times not accounted for at all. *See id.* at 10-11.

3.28 In response to the State's claims, PFS and the Staff assert that PFS has adequately defined its project in terms of the design of the facility, the amount

of spent fuel that will be stored there, and the operational activities that will take place there. *See* PFS Reply at 9; Staff Reply at 12. Responding to the State's assertion that PFS must show the rate at which spent fuel will be shipped to the proposed ISFSI, PFS avers that the timing of when PFS will incur each of the costs of constructing and operating the facility is not only beyond the scope of the contention, but also immaterial to determining the total costs of the facility. *See* PFS Reply at 11-12. In support of PFS's position, the Staff considers it unreasonable to require PFS to predict the volume of SNF for each year of generation, given that PFS has provided a plausible forecast for its annual O&M costs based on different scenarios. *See* Staff Reply at 13. PFS also dismisses the State's concern that PFS's use of preliminary data in its calculations renders its estimates unreliable by maintaining that its estimates were developed through reasonable methodologies based on specific data and explicit, plausible assumptions. *See* PFS Reply at 13. Likewise, the Staff finds the State's argument unpersuasive in this regard, given that most of the major decisions regarding the project design have, in fact, been resolved. *See* Staff Reply at 13. PFS further argues that the State's concerns over PFS's categorization of capital costs as construction or O&M costs are immaterial, because the fundamental issue before the Board is whether PFS has included the costs at all in its estimates, such that they are not understated. *See* PFS Reply at 10-11. For its part, the Staff asserts that it is satisfied that PFS has appropriately accounted for all capital costs as either part of its construction or O&M estimates. *See* Staff Reply at 14.

2. Accountability of All Costs

3.29 A second general concern voiced by the State is PFS's treatment of certain costs that it plans to pass through to its customers. The State claims that by treating certain expenditures, such as **x x x x x x x x x x x x x x** costs, as revenue rather than expenses, PFS and the Staff have grossly underestimated the overall costs of the ISFSI project. *See* State Findings at 12. Given that passthrough costs account for **x x x x x x x** percent of the O&M budget, the State argues that PFS must account for these costs in its estimates, regardless of how they will be offset by incoming revenue. *See id.* at 12-13.

3.30 Countering the State's concern, PFS maintains that the passthrough costs are treated as costs, rather than as revenue, in its estimates and that the passthrough provisions in PFS's customer service agreements are an acceptable means of providing assurance under the Commission's decision in *Monticello* that such costs will be paid. *See* PFS Reply at 14-15 (citing *Northern States Power Co.* (Monticello Nuclear Generating Plant; Prairie Island Nuclear Generating Plant, Units 1 and 2; Prairie Island Independent Spent Fuel Storage Installation), CLI-00-14, 52 NRC 37, 51 (2000)). Although the Staff similarly rejects the State's argument, in its analysis of PFS's financial qualifications, the Staff considered

the passthrough costs to be both expenses and revenues. *See* Staff Reply at 14. Thus, the Staff finds that regardless of whether a passthrough cost is accounted for as a cost, it will not impact PFS's ability to fund the construction or operation of the ISFSI, because it will be paid for by PFS's customers rather than by PFS itself. *See id.*

D. Construction Cost Estimates

1. Inadequate Scope

3.31 The first of the State's concerns regarding PFS's construction cost estimates relates to certain costs that were not included in the estimates. The State argues that it would be irrational to exclude estimates for the design drawings of the proposed facility, which are potentially significant costs that PFS will likely attempt to recover, along with all of the costs associated with the project, regardless of whether they were incurred before or after construction begins. *See* State Findings at 14. The State asserts that such cradle-to-grave cost estimates are consistent with the estimates approved in *Claiborne,* in which the Commission observed that ''[h]ard construction costs of the [facility] . . . include the cumulative construction costs of the centrifuges, and owners' costs back to the beginning venture phase.'' CLI-97-15, 46 NRC at 306 n.16. Furthermore, the State argues, PFS's construction estimates are inadequate in that they do not take into account the cost of capital renewal. *See* State Findings at 14.

3.32 Both PFS and the Staff maintain that because the design drawings constitute preconstruction costs, they need not be accounted for in the construction cost estimates. *See* PFS Reply at 16; Staff Reply at 15. PFS directs the Board's attention to the language of 10 C.F.R. § 50.10(c)(1) and (2) in arguing that the NRC's regulations specifically allow an applicant to engage in preconstruction activities such as site exploration and the procurement or manufacture of facility components before obtaining a construction permit from the agency. *See* PFS Reply at 16. Furthermore, PFS contends, because the text of the regulations refers only to ''construction'' costs, and not to ''preconstruction'' costs, preconstruction activities — such as the design of the facility, preparation of the safety analysis report, and licensing before the NRC — fall outside the scope of Part 72 and, hence, outside the scope of contention Utah E/Confederated Tribes F. *See id.*

3.33 In refuting the State's assertions in this regard, the Staff argues that the State's reliance on the Commission's *Claiborne* decision for including preconstruction costs in the estimates is misplaced. According to the Staff, when the Commission referred to hard construction costs as including ''owners' costs back to the beginning venture phase,'' this did not reflect the Commission's holding but rather its understanding of what the applicant considered to be the construction costs. *See* Staff Reply at 15 (citing *Claiborne,* CLI-97-15, 46 NRC at 306 n.16).

Furthermore, the Staff contends, because PFS will not recoup its preconstruction costs from either its construction or O&M funding, unless revenue exceeds costs by a sufficient amount to refund money back to the owners, these costs need not be listed as construction costs. *See id.* (citing Tr. at 2619-20).

3.34 With regard to the cost of capital renewal, both PFS and the Staff argue that any capital renewal (i.e., replacement of capital equipment) that would be required would be part of PFS's maintenance costs, which have already been accounted for in the O&M estimates. *See* PFS Reply at 17 (citing Tr. at 1746); Staff Reply at 16.

2. Uncertain Seismic Qualification Costs

3.35 The State avers that because Mr. Takacs did not know under which seismic code the canister transfer building (CTB) and the crane were qualified, and because no additional funds have been set aside for potential seismic design upgrades, PFS's construction cost estimates are uncertain and less conservative. *See* State Findings at 15.

3.36 In response, both PFS and the Staff maintain that the CTB and the crane were seismically qualified when the vendors quoted their prices to Mr. Takacs, *see* Tr. at 1750; therefore, his awareness of which particular seismic code was applicable is irrelevant, because the seismic factors were taken into account. *See* PFS Reply at 18; Staff Reply at 16. Moreover, they argue, even assuming that the seismic designs will need to be changed, the State has proffered no evidence to show that the 10% contingency fund would be insufficient to offset any additional costs needed to bolster PFS's seismic qualifications. *See* PFS Reply at 18; Staff Reply at 16.

3. Estimates Unreliably Based on Preliminary Information

3.37 The State alleges that the reliability of PFS's construction estimates is further undermined by the use of conceptual renderings by Stone & Webster in the preparation of the estimates. *See* State Findings at 15. Because conceptual drawings, which represent the earliest stage of the design process, were used to estimate the cost of construction for most of the proposed buildings, the State claims that PFS has not established that the costs of constructing the facility are adequately defined. *See id.* at 16-17. Furthermore, the State argues, Mr. Takacs testified that the anticipated margin of error between the estimated and actual construction costs was between –15 and +25%. *See id.* at 16; Tr. at 1706-07. Although he also testified that this divergence was within the accuracy standard used by the American Association of Cost Engineers and that he expected the actual costs to fall below the estimate provided by Stone & Webster, the State is

concerned that PFS may have underestimated the project by as much as 15% and urges the Board to give little credence to portions of Mr. Takacs' testimony that the costs were probably overestimated. *See* State Findings at 16-17.

3.38 PFS and the Staff respond to the State's claim by arguing that the actual drawings used by Mr. Gase and Mr. Takacs in the preparation of their estimates, *see* PFS Exh. K (Floor Plan, Elevation, and One-Line Diagram Electrical Drawings for PFSF Administration, O&M, and Security and Health Physics Buildings), provide a level of detail that goes beyond the conceptual stage, *see* PFS Reply at 19; Staff Reply at 17. Furthermore, they assert, the drawings of the CTB and the storage pads were even more detailed than the drawings used for the other structures. *See* PFS Reply at 19; Staff Reply at 17. In light of the level of detail available to Stone & Webster and Mr. Takacs' expertise, PFS and the Staff contend that the Board should accept Mr. Takacs' testimony that his estimates are likely conservatively overstated. *See* PFS Reply at 19-20; Staff Reply at 17-18.

4. Breached or Defective Canisters at PFSF

3.39 The State asserts that the elimination of two breached canister overpacks from the most recent PFS construction budget is an omission that further undermines any conservatism built into PFS's cost estimates. *See* State Findings at 19, 21. According to the State, under PFS's plan to place a breached canister in one of the six transportation casks PFS intends to acquire, a transportation cask that would normally be used to transport SNF would have to be taken out of service in order to store the breached canister. *See id.* at 19. The State argues that the funds needed to replace a transportation cask taken out of service would apparently come from the **x x x x x x x x x x x x x** miscellaneous contingency fund, which the State asserts is a slight contingency margin to cover other large capital expenses that fall under the ''miscellaneous'' category. *See id.* at 19-20.

3.40 In its rebuttal, PFS argues that the issue of whether PFS should include breached canister overpacks in its design plan is outside the scope of contention Utah E/Confederated Tribes F, because the design of the proposed facility does not include breached canister overpacks. *See* PFS Reply at 21. Furthermore, PFS avers, because the **x x x x x x x x x x x** construction contingency fund is not segregated, monies in the fund can be used to meet any unexpected cost associated with the facility, not just unexpected expenses associated with miscellaneous items. *See id.*

3.41 For its part, the Staff considers PFS's decision to use a transportation cask, rather than a breached canister overpack, in the unlikely event of a breached canister to be a reasonable business decision, not to be second-guessed by the Staff and Board, if avoidable. *See* Staff Reply at 18 (citing CLI-98-13, 48 NRC 26, 36-37 (1998)). The Staff also regards PFS's 10% contingency fund as sufficient to cover any unexpected costs. *See id.* at 19.

5. Rail Equipment

3.42 According to the State, another erosion of conservatism in PFS's construction cost estimates is its plan to acquire mostly used or refurbished rail equipment — e.g., mainline and shortline locomotives, a security car, and buffer cars — for transporting SNF from the various reactor sites around the country to the PFS ISFSI. *See* State Findings at 21. The State asserts that the cost differential between new and used rail equipment is substantial. *See id.* **x x.** *See id.* at 22. As such, the State claims that these costs do not appear in PFS's cost estimates, although they should be accounted for in either the construction or O&M estimates. *See id.* at 22-23. The State also contends that because PFS has no apparent fiscal plan to replace the used capital equipment, including rail equipment, PFS cannot provide reasonable assurance of its financial qualifications, particularly if the used equipment needs to be replaced or if its maintenance becomes a financial drain over the 20- to 40-year life of the facility. *See id.* at 23. Finally, the State argues that the used railroad cars that PFS plans to acquire and operate as buffer cars may not be free from contaminants at the time of purchase. *See id.*

3.43 PFS and the Staff respond to the State's claims by arguing that even if new rail equipment is more expensive than used and refurbished equipment, the State does not demonstrate how that assertion invalidates PFS's cost estimates. *See* PFS Reply at 22; Staff Reply at 20. PFS also contends that the State has offered no evidence indicating that the used rail equipment will require replacement or costly maintenance; to the contrary, Mr. Parkyn's unrefuted testimony stated that used rail equipment was highly reliable and could be operated as long as it was maintained. *See* PFS Reply at 22; Staff Reply at 20-21; *see also* Tr. at 1862, 1892. **x x.** *See* PFS Reply at 22. For its part, the Staff is satisfied that **x x.** *See* Staff Reply at 21. In response to the State's concern relative to possible contamination of the used cars, PFS argues that this issue falls outside of the scope of the contention. *See* PFS Reply at 23. Moreover, PFS and the Staff assert, Mr. Parkyn's testimony that the used or

refurbished cars would not previously have been exposed to radioactive material or other hazardous materials, *see* Tr. at 1873-74, was not challenged by the State. *See* PFS Reply at 23; Staff Reply at 22.

6. Cask Transfer Systems

3.44 The State also takes issue with PFS's method of estimating the costs of the Hi-Trac transfer casks that will be used to transfer fuel from the transportation casks to the storage casks. The State argues that the PFS estimate for the transfer casks is too conceptual in nature, in that it is based on a comparison of the functions of a transfer cask with that of a transportation cask, rather than on a ''hard estimate.'' State Findings at 24. In addition, the State contends that because the dry transfer system, which will be used to load the fuel assemblies into the canisters at the utility sites, will need to be specially designed to meet PFS's specifications, PFS needs to account for the expenses of designing, licensing, and fabrication of the two dry transfer casks in its construction costs estimate. *See id.* at 24-25. Furthermore, the State argues, as with the transfer casks, the design of the dry cask system remains in the conceptual stage. *See id.* at 25-26. In this regard, the State disputes PFS's claim that the design and licensing of the dry cask system will be completed prior to the start of construction, and thus, asserts that those costs must also be included as construction expenditures. *See id.* at 26.

3.45 In response, PFS maintains that it is not unreasonable for an applicant to estimate the cost of one system, such as the transfer cask system, on the basis of the cost of a similar system. *See* PFS Reply at 23. Likewise, the Staff does not view PFS's methodology as being problematic. *See* Staff Reply at 22-23. Moreover, PFS avers, the State has presented no evidence showing that PFS's estimates for the transfer cask and dry cask systems are incorrect and no evidence showing that the dry cask design would not be completed during the preconstruction period. *See* PFS Reply at 24; Staff Reply at 24. According to PFS and the Staff, the design and licensing costs of the dry cask system fall outside the scope of PFS's construction costs. *See* PFS Reply at 24; Staff Reply at 23.

7. Interest During Construction

3.46 **x x.** *See* State Findings at 27. The

State asserts that all interest payments made during the construction period must be accounted for in PFS's construction cost estimates. *See id.*

3.47 **x x.** *See* PFS Reply at 25; Staff Reply at 24.

8. Contingencies

3.48 Contrary to the Staff's findings, the State avers that the 10% contingency in PFS's cost estimates will not be sufficient to cover unanticipated construction costs or costs caused by delays during construction. *See* State Reply at 11. The State describes a number of expenses that PFS has either not included or established firmly in its estimates, such as numerous passthrough costs, costs of capital rail equipment purchases, and costs associated with the dry cask transfer system design. *See id.*

9. Additional License Conditions

3.49 In addition to the license conditions mandated by the Commission in CLI-00-13, *see* 52 NRC at 36, the State requests that the Board impose additional conditions before granting the PFS license. To eliminate any conflict between the PFS environmental report and Mr. Parkyn's testimony regarding the construction start date, the State seeks the imposition of a license condition that prohibits PFS from commencing construction until after the NRC issues the license for the proposed ISFSI. *See* State Reply at 6. Because the capacity of the PFS facility has a direct bearing on PFS's cost estimates and when those costs will be incurred, the State also requests a license condition specifying the three phases of construction. *See id.* at 6-7. In addition, the State insists that PFS agree to a license condition stating that it will use the Low rail corridor option for shipping the SNF from the reactor sites to the ISFSI, because PFS has not described in detail the estimated costs associated with the alternative shipping option, which would entail shipping the SNF by rail to the Rowley Junction ITF and then by heavy haul truck to the ISFSI. *See id.* at 8. According to the State, merely asserting that the Low rail option is the upper bound for the cost estimate without breaking out the costs of the ITF option is insufficient. *See id.* The State also asks the Board to impose a license condition that would proscribe PFS from shifting construction

or operating rail and other transportation-related costs to the GSLSR. *See id.* at 10. To avoid any confusion as to the scope of construction costs that the Staff must review, the State also urges the adoption of a license condition requiring that administrative and operating expenses incurred during construction be included in the PFS construction cost estimates. *See id.* at 11.

10. Staff Review of Construction Costs

3.50 In addition to questioning the adequacy of PFS's construction cost estimates, the State also criticizes the Staff's evaluation of PFS's estimates. In particular, the State challenges what it sees as the Staff's deferral to PFS's business judgment and ''wholesale acceptance'' of PFS's cost estimates. *See* State Findings at 28, 29. Rather than preparing its own estimates or hiring an independent contractor, the Staff relied on the Commission's guidance in CLI-98-13 on second-guessing private business decisions and merely compared the 1997 PFS Business Plan with the 1998 Plan without analyzing more recent cost estimates produced by PFS, according to the State. *See id.*

3.51 The State also takes issue with the Staff's inconsistent treatment of the license period in its analysis of PFS's cost estimates. The State points out that while the Staff allows PFS to use a 40-year license term to calculate costs, such as average annual O&M costs, on the one hand, on the other hand, the Staff argues against including all expenses, including capital replacement costs, in the 40-year period. *See* State Reply at 6. The State argues that all cost estimates must be evaluated in terms of the 20-year license for which PFS has applied. *See id.*

3.52 Addressing the State's concerns, PFS defends the Staff's review, noting the Staff is not required to prepare its own estimates to determine whether the PFS estimates are reasonable. *See* PFS Reply at 25. In the view of PFS, the Staff applied the proper standard of reasonableness in evaluating PFS's construction cost estimates, taking into account the Commission's statements in CLI-98-13 regarding avoiding second-guessing business judgments and in CLI-00-13 concerning estimates based on plausible assumptions and forecasts. *See id.* at 26.

3.53 In its response to the State's claims, the Staff first observes that given that the Applicant, not the Staff, bears the burden of proof relative to safety issues, the adequacy of the Staff's safety review is irrelevant to whether an application should be approved. *See* Staff Reply at 24-25. Furthermore, the Staff argues Staff witnesses McKeigney and Wood did not accept PFS's estimates wholesale; rather, they devoted a combined 600-700 hours over the past 3 years reviewing PFS's financial qualifications and cost estimates. *See id.* at 25. Although they did not prepare their own independent estimates, the Staff contends that Dr. McKeigney and Mr. Wood reviewed the cost of nuclear facilities and other ISFSIs to compare the key parameters of costs and steps identified by PFS, performed a confirmatory review of the Stone & Webster estimates to determine whether major components

were covered, and confirmed PFS's mathematical calculations. *See id.* Finally, the Staff notes that contrary to the State's assertion, it did consider the most recent fourth quarter 1999 cost estimates provided by PFS. *See id.* at 26.

E. Operating and Maintenance Costs

1. Scope of O&M Costs

3.54 The State claims that while the actual size of the facility that PFS will operate remains uncertain, the planned capacity of the ISFSI is a 40-year, 40,000 MTU facility. *See* State Findings at 30. In this regard, the State argues, because there are no license conditions that will ensure that PFS has reasonable assurance of securing the necessary funds to pay for the estimated operating costs for any additional SNF stored at the facility beyond the initial amount included in PFS's LC-2 compliance demonstration, PFS must show reasonable assurance of obtaining enough money to cover the estimated operating costs for a 40,000 MTU facility. *See id.* at 31. According to the State, some O&M costs are variable and dependent upon the amount of inbound and outbound SNF each year, the amount of SNF stored at the site each year, the geographical location of the reactor site, or the customer's desire to finance its construction payment through debt financing, and these uncertain factors will determine when O&M costs are incurred. *See id.* Thus, the State points out, the terms and conditions of the customer service agreements, which will incorporate provisions relative to these factors, will play a significant role in defining the scope of the PFS project and its related O&M costs. *See id.* at 32.

3.55 In response to the State's arguments, PFS takes the position that pursuant to LC-1, the capacity of the proposed ISFSI will be known before operations begin; therefore, it is unnecessary for PFS to provide assurance that it will have funds to cover the operating costs for a larger 40,000 MTU facility. *See* PFS Reply at 27. PFS further argues that the State's concern regarding expenses associated with any additional SNF stored onsite is misplaced, in that those costs will be covered by long-term customer service agreements. *See id.* at 28. Because it will submit a model service contract to the Board and parties, PFS contends that a finding by the Staff that the model agreement meets the financial assurance requirements embodied in LC-2 would also ensure that subsequent agreements for additional storage would likewise provide reasonable assurance of sufficient funds to cover the ensuing operating costs for such additional storage. *See id.* For its part, the Staff argues that when the Commission revised LC-2 to prevent PFS from proceeding with operation of the facility unless it had service agreements with sufficient prices in place to cover the entire term of the license, the Commission resolved the issue of covering the costs of any additional fuel stored at the PFS facility. *See* Staff Reply at 27.

3.56 With respect to the variable factors affecting annual O&M costs alluded to by the State, PFS asserts that many of its O&M costs would not change significantly with the storage of additional SNF at the facility, given that most of the expenditures are either not overly sensitive to the amount of fuel or constitute a relatively small portion of the total O&M budget. *See* PFS Reply at 28. Significant costs that would vary with the amount of spent fuel to be stored at the ISFSI would include storage canisters and casks (**x x x x x** percent of O&M costs for a 40,000 MTU facility) and transportation costs (nearly **x x x x x** percent of O&M costs). *See id.* at 28-29. **x x.** *See id.* at 29. Again, PFS observes, verification by the Staff that the MSA satisfies LC-2 would similarly assure that subsequent agreements for the additional storage of SNF at the facility would provide reasonable assurance of sufficient funds to cover the additional costs. *See id.*

2. Relationship of Costs to the License Conditions

3.57 The State avers that LC-2 requires PFS to establish not only average O&M costs but also the estimated O&M costs at the time they are expected to be incurred over the planned life of the facility. *See* State Findings at 32-33. Thus, argues the State, the average annual costs bear no relationship to projected actual yearly O&M expenses. Without this showing, the State maintains, there will be no relationship between O&M costs and the revenue generated under each individual sufficient to cover the operating costs at the time the costs are incurred. *See id.* at 33. The State further contends that if costs are not broken down by the year in which they are anticipated to be incurred, the Staff will be placed in a position of making factual and legal determinations in its post-hearing/post-license review of O&M costs. *See* State Reply at 14, 15.

3.58 PFS responds to the State's claim by first asserting that the timing of PFS operating costs is outside the scope of contention Utah E/Confederated Tribes F. *See* PFS Reply at 30. Second, PFS argues, LC-2 only requires PFS to show that its service agreements will include prices sufficient to cover the total operating costs of the facility; therefore, PFS need not provide its O&M cost estimates as a function of time. *See id.*

3.59 In its reply, the Staff points out that compelling PFS to provide estimated costs for each year of operation exceeds the regulatory requirements set forth in 10 C.F.R. § 72.22(e). *See* Staff Reply at 28. Instead, the Staff finds that an

estimate that provides an average yearly cost is adequate to provide reasonable assurance as to the amount of funding that is required. *See id.*

3. Unsupported Cost Estimates

3.60 The State further argues that because PFS has neither described nor supported the basis of its cost estimates, PFS has failed to establish on the record the reasonableness or reliability of its O&M cost estimates. *See* State Findings at 33.

3.61 In response, PFS maintains that it has provided the bases and assumptions underlying its estimates for each category of its O&M costs. *See* PFS Reply at 30 (citing Parkyn/Kapitz O&M Testimony at 7-26).

4. Assumptions

3.62 Moreover, the State contends, PFS O&M costs must be estimated based only on the 20-year period of the initial license, rather than on the anticipated 40-year term. *See* State Findings at 34. PFS, however, has based its total O&M costs on the assumption that it will receive a 20-year license renewal after the initial 20-year license term, which, in the State's view, renders the existing estimates ''utterly meaningless.'' *Id.* In this context of PFS's anticipated license renewal application review, the State is concerned that because a Department of Energy permanent repository may not be available to receive all the SNF stored at the PFSF at the end of the ISFSI's initial 20-year license term, the Staff will have no option but to renew the PFS license, without a meaningful review, if the SNF cannot be returned to the owners. *See id.*

3.63 PFS counters that contrary to the State's claim, basing its estimates on a 40-year planned term for the facility is permitted under both NRC case law and regulations. *See* PFS Reply at 31. Furthermore, PFS asserts, it would be reasonable to assume that PFS would be able to renew its license for an additional 20 years, given that the storage casks and other systems PFS plans to use at the facility can be either maintained for much longer than 20 years or replaced as necessary over the 40-year planned life of the facility. *See id.*

5. Uncertainties

a. Capacity and Quantity of Stored Fuel

3.64 The State claims that both the rate at which fuel will be received at and leave the PFS facility and the length of time it will be stored at the site affect when PFS's O&M costs will be incurred. *See* State Findings at 35. Without any signed service agreements in place, the State argues, PFS cannot even speculate

as to the amount of inbound, outbound, and stored SNF for any given year. *See id.* Thus, asserts the State, PFS cannot reasonably estimate its annual or total O&M costs. *See id.* at 36.

3.65 In its reply, PFS reiterates its argument that the issue of when PFS will incur its O&M costs is outside the scope of the contention. *See* PFS Reply at 32. PFS contends that the O&M estimates it has provided have adequately addressed the amount of SNF that will be stored at the proposed facility. *See id.* Furthermore, PFS argues, the timing of the fuel shipments to the ISFSI will not have a material impact on the O&M costs. *See id.* In PFS's view, the State has not proffered any evidence suggesting that shipment of less than 40,000 MTU of SNF to the facility, the amount on which PFS estimates are based, would cause PFS estimates to be deficient. *See id.* In addition, PFS maintains that the primary effect of storing less fuel at the site would be to eliminate the need for storage casks and canisters. *See id.* In this regard, because it will have service agreements in place before it begins to operate the facility, PFS claims that the cost of the unused casks and canisters can easily be deducted from the cost estimates in order to demonstrate that PFS will have sufficient funds to cover its operating costs for a smaller facility. *See id.*

b. Canisters and Casks

3.66 The State also challenges PFS's O&M cost estimates based on when PFS will incur the costs of canisters and storage casks, which constitute a significant portion of the O&M budget. *See* State Findings at 36. Because there are no service agreements in place and because the availability of canisters and storage casks may be limited due to manufacturing issues, the State argues that PFS cannot reasonably estimate when it will incur canister and storage cask costs. *See id.* at 37. This timing, the State avers, is critical to estimating annual O&M costs, *see id.,* and the PFS approach does not, in the State's view, take into account the fact that most of the canister and cask costs will be incurred within the first 20 years of the facility's operation. *See* State Reply at 14.

3.67 In rebuttal, PFS again asserts that the timing of when PFS incurs its O&M costs is outside the scope of the contention at issue. *See* PFS Reply at 33. Moreover, PFS contends, while the State claims that the rate at which SNF is shipped to the planned facility may be limited because of cask and canister fabrication restrictions, it does not indicate how those restrictions would cause PFS O&M cost estimates to be understated. *See id.*

3.68 For its part, the Staff finds no reason to assume that PFS will not be able to acquire the casks and canisters at a rate consistent with the estimated use of the facility. *See* Staff Reply at 28-29. The Staff is satisfied that Holtec, the manufacturer of the casks, will be able to build within 2 years a local manufacturing facility in Utah capable of producing between 100 and 200 units

per year. *See id.* at 28. According to the Staff, the State has not presented any evidence to suggest that PFS's plan for and estimate of production by a local manufacturing facility is inaccurate. *See id.*

c. Transportation Costs

3.69 The State also points out what it views to be various problems with PFS transportation cost estimates. For example, the State argues, PFS has not estimated any reasonably available operating costs for either of the two SNF transportation alternatives; the all-rail alternative utilizing the proposed GSLSR or the ITF alternative in which transportation casks brought by rail to an ITF near Rowley Junction would be transferred onto heavy haul trucks for transport to the proposed ISFSI. *See* State Findings at 37-38. According to the State, as evidence of its O&M estimate, PFS has merely proffered a transportation allowance that was based on the all-rail alternative from the LaCrosse, Wisconsin reactor to the PFS site in Utah. *See id.* at 38. In the State's view, the PFS transportation cost allowance or railroad fee has no relationship to actual transportation costs, which are a function of actual distances traveled. *See* State Reply at 14. **x x.** *See* State Findings at 38. In this regard, the State argues that PFS has structured its planning such that any effort to provide accurate and complete evaluation of its estimated transportation costs is avoided. *See id.* In addition, the State challenges PFS's decision to choose the transportation alternative after the NRC issues PFS the ISFSI license. *See id.* Because the O&M costs cannot be estimated for the selected transportation alternative at this time, the State asserts that it is reasonable for PFS to provide cost estimates for both alternatives. *See id.* According to the State, however, PFS has not proffered any evidence establishing the operating estimates for the ITF alternative. *See id.*

3.70 **x x.** *See* PFS Reply at 33. **x x.** *See id.* Contrary to the State's assertions, PFS and the Staff

argue that both Mr. Parkyn and Mr. McKeigney testified that the total life cycle (construction and operating) costs for the ITF option were lower than that of the all-rail alternative. *See id.* at 34; Staff Reply at 30. **x x.** *See* PFS Reply at 34.

d. Interest Payments

3.71 The State also takes issue with the PFS failure to estimate the costs of any construction debt financing. According to the State, PFS has taken this position because the decision to debt finance the construction portion of the storage fee belongs to the customer and will not be resolved until the service agreements are signed. *See* State Findings at 39. The State also argues that while PFS has assumed that the non-equity portion of the construction costs will be paid for under the service agreements, PFS has not produced any evidence for the record to support this assumption. *See id.* Because LC-1 affords PFS the option to debt finance construction costs, the State insists that these costs must be included in the O&M cost estimates. *See id.* at 40.

3.72 **x x.** *See* PFS Reply at 34; Staff Reply at 31. PFS claims that it will not incur any construction debt of its own. *See* PFS Reply at 34. **x x.** *See* Staff Reply at 32.

6. Omitted/Underestimated Costs

3.73 The State alleges that PFS has omitted or underestimated a number of costs from its O&M estimates.

a. Passthrough Costs

3.74 According to the State, PFS fails to provide estimates for some costs it designates as ''passthrough'' costs because PFS confuses revenue with costs. *See* State Findings at 40. In the State's view, however, passthrough costs are operating costs regardless of whether PFS characterizes a cost as a passthrough. *See id.* Thus, the State asserts, PFS must provide actual reasonable estimates of the costs PFS intends to pass through to its customers, which constitute **x x x x x x x x x x x x x x x x x x x** percent of the total O&M budget. *See id.* at 41. The State maintains that PFS has failed to provide estimates for certain passthrough costs, **x x.** *See* State Reply at 18.

3.75 PFS responds by pointing to the Commission's decision in *Monticello,* which held that an applicant may rely on passthrough provisions that bind a third party to pay the costs and be relieved of having to provide actual estimates of those costs, so long as there is reasonable assurance that the third party will pay its obligations to the Applicant. *See* PFS Reply at 35 (citing CLI-00-14, 52 NRC at 49-50). Furthermore, PFS contends, it has provided actual estimates of the **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x,** which together constitute **x x x x x x x x x x x** percent of PFS's O&M costs. *See id.*

3.76 For its part, the Staff maintains that, contrary to the State's arguments, PFS *has* appropriately estimated the O&M costs that will be passed through to its customers. *See* Staff Reply at 31. In the Staff's view, PFS has provided reasonable estimates of the canister and storage cask costs, railroad fees, and regulatory fees. *See id.*

b. Debt Financing

3.77 In addition to the interest payments PFS may have to make on the construction loans it may procure on behalf of its customers, the State argues that PFS must also include any debt financing costs at expected interest rates and principal repayments associated with the loans in its O&M cost estimates, **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x.** *See* State Findings at 41.

3.78 **x x**

x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x. *See* PFS Reply at 35; Staff Reply at 32. Moreover, the Staff asserts, it would be unreasonable to require PFS to calculate interest and principal payments for customers who may not even secure their loans through PFS. *See* Staff Reply at 32.

c. Transportation Costs

3.79 The State argues that because some reactor sites do not have onsite rail access, casks at these reactors must be transported by barge or heavy haul truck to a railhead. *See* State Findings at 42. To the extent PFS is responsible for payment of transporting the casks to a railhead, the State insists that these costs also be included among PFS's transportation cost estimates. *See id.* In addition, the State asserts, PFS must make payments to the U.S. Bureau of Land Management (BLM) for annual compliance fees, lease payments, and a restoration bond for a right-of-way to construct either the GSLSR or an ITF near Rowley Junction. *See id.* These payments, argues the State, must also be included in PFS's O&M costs as transportation costs. *See id.* The State also contends that, in the event the all-rail alternative is chosen, the costs of rail line usage and fuel on the GSLSR must be accounted for as transportation costs. *See id.* at 43. On the other hand, if PFS opts for the ITF alternative, the State avers that the ITF operating costs must include ITF employee salaries and the costs of transporting casks by heavy haul truck down Skull Valley Road. *See id.*

3.80 **x x.** *See* PFS Reply at 36; Staff Reply at 33. All of the remaining costs referenced by the State, PFS and the Staff maintain, have already been included in PFS's transportation cost estimates for O&M. *See* PFS Reply at 36; Staff Reply at 33-34.

3.81 In its reply to the proposed findings of fact submitted by PFS and the Staff, the State counters that it is impossible to ascertain what is or is not included in the actual scope of the transportation cost estimates. *See* State Reply at 16. In the State's view, the following expenses should all be considered part of the O&M costs relating to transportation: (1) security personnel for transporting the spent fuel, (2) security personnel at the ITF, (3) maintenance of the GSLSR, (4) maintenance of the locomotives, (5) transportation of welding equipment for spent fuel transfers, (6) transportation of empty canisters to the reactor sites, (7) transportation of the transfer casks and dry transfer system, (8) transportation of loaded casks from a reactor site to a railhead, (9) leases of public lands, and (10) operation of heavy haul trucks from the ITF. *See id.* According to the State,

because PFS has made no effort to break out the **x x x x x** per kilogram of uranium transportation credit among the foregoing costs, the Board should consider all ten of the above costs to be missing from PFS's O&M cost estimates. *See id.* at 17.

d. Host Payments

3.82 The State argues that pursuant to a May 23, 2000 host benefit agreement between PFS and Tooele County, PFS will pay Tooele County $2600 for each canister owned by a PFS member per year and $3250 for each canister owned by a nonmember per year. *See* State Findings at 43-44. However, because PFS's estimates are based only on the lower $2600 member fee and it is unreasonable to assume that PFS members will own all the SNF stored at the Skull Valley site, *see id.* at 44, the State posits that PFS's host benefit payment estimates to Tooele County are understated by approximately $24 million, based on a reasonable estimate of amounts of member and nonmember fuel that may be stored onsite. *See* State Reply at 17.

3.83 In response, both PFS and the Staff counter that additional payments to Tooele County for nonmember fuel stored at the facility would be more than offset by the higher prices that PFS will charge nonmember customers for storage. *See* PFS Reply at 36; Staff Reply at 34-35.

e. Castle Rock **x x x x x x x x**

3.84 The State also challenges PFS O&M cost estimates on the basis of the PFS purported failure to include in its estimates payments **x x.** *See* State Findings at 44. The State asserts that pursuant to an agreement with Castle Rock, PFS must **x x.** *See id.* at 44-45. Thus, the State argues, PFS's O&M cost estimates are unreasonable not only because PFS has not accounted for the **x x x x x x x x x x x x,** but also because the timing of the **x x x x x x x x x x x x x x x x x x x x x** currently is unknown. *See id.* at 45.

3.85 PFS and the Staff maintain that, contrary to the State's claim, **x x x x x x x x x x x x x x x x x x x x x x x x x x** are included in the O&M cost estimates.

See PFS Reply at 37; Staff Reply at 35-36. PFS further argues that the timing of when **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** will come due is beyond the scope of the contention at bar. *See* PFS Reply at 37. Moreover, PFS avers, because **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** represent a mere **x x x x x x x x x x x x** of PFS's total O&M costs, their timing is immaterial to the reasonable assurance determination. *See id.*

f. Bureau of Indian Affairs Bonds

3.86 According to the State, the United States Department of the Interior's Bureau of Indian Affairs (BIA) has the authority to require PFS to post a bond, and the costs of posting such a bond must be included as an operating cost in PFS's estimates. *See* State Findings at 45. In addition, the State insists that BIA bonding or other financial requirements must be included in the estimated O&M costs for the year in which the costs are expected to occur. *See id.*

3.87 In response, PFS argues that it is reasonable to omit the costs of a BIA bond from its estimates because BIA has not indicated that it will require PFS to post such a bond. *See* PFS Reply at 37. Moreover, PFS maintains, many of the items for which BIA has required bonds in the past are covered by other mechanisms PFS will have in place, such as onsite property insurance. *See id.*

3.88 For its part, the Staff agrees with PFS that it need not account for the costs of posting a BIA bond, in light of provisions in the lease agreement between PFS, the Skull Valley Band, and the BIA that address this issue. *See* Staff Reply at 36. Pointing to the language of the lease, the Staff indicates that the Skull Valley Band and the BIA waive any obligation of PFS to post a surety bond, unless PFS fails to make its lease payments. *See id.* Thus, argues the Staff, it is reasonable for PFS to exclude these costs from its O&M estimates. *See id.*

g. Skull Valley Band Bonds

3.89 The State claims that because the Skull Valley Band has the option to require PFS to obtain additional insurance or bonding, PFS must include these costs in its O&M cost estimates for the year in which the costs are expected to occur. *See* State Findings at 45.

3.90 In its reply to the State's proposed findings of fact, PFS maintains that it need not include the cost of a bond in its estimates because the Skull Valley Band has not indicated that it would require PFS to post such a bond. *See* PFS Reply at 37. In the Staff's view, the matter is resolved in light of the lease agreement's waiver provisions that relieve PFS of its obligation to post a surety bond. *See* Staff Reply at 36.

7. Staff Review of O&M Costs

3.91 The State also takes issue with the Staff's endorsement of PFS's treatment of passthrough costs in its O&M estimates. *See* State Findings at 45-46. In particular, the State disputes the Staff's opinion that PFS's use of passthrough costs is reasonable because many businesses charge on a cost-plus basis beyond a certain base cost. *See id.* at 45. The State insists that because a cost is a cost, regardless of how revenue will be collected to pay it, PFS must provide reasonable and complete actual cost estimates for passthrough costs, **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x,** rather than relying on whether there will be sufficient revenue to offset those costs. *See id.* at 46.

3.92 In response, PFS reprises its argument that the Commission sanctioned such use of passthrough costs in its *Monticello* decision. *See* PFS Reply at 38. The Staff, on the other hand, argues that **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x,** PFS has provided reasonable estimates for canister and cask costs, transportation costs, and regulatory fees based on its Memorandum of Understanding with Holtec, an average shipping distance, and the Commission's fee schedule, respectively. *See* Staff Reply at 37.

8. License Conditions

3.93 The State seeks the imposition of a license condition that would require PFS to make an additional showing of its financial qualifications after the facility begins initial operations. *See* State Reply at 12-13. Because the Staff will review PFS's O&M cost estimates just once under LC 17-2, the State is concerned that the Staff has no enforceable mechanism to review PFS's future and ongoing O&M costs once operation is underway, particularly in light of PFS's lack of assets and reliance on storage fees to fund its O&M expenditures. *See id.* at 13. According to the State, a single Staff review of O&M costs for the initial capacity facility does not satisfy the requirement that PFS will be financially qualified to operate a 40,000 MTU facility for 20 or 40 years. *See id.*

F. Insurance

3.94 With respect to onsite property insurance, the State contends that rather than committing to obtain a specific amount of coverage, PFS has committed only to obtaining the amount of coverage that can be purchased with a premium of **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x.** *See* State Findings at 46-47. If, in the future, the amount of coverage that a **x x x x x x x x** premium will buy falls below $70 million, the State criticizes PFS's approach, which will be to either continue to carry $70 million in coverage or perform a

consequences assessment to calculate the coverage necessary. *See id.* at 47. The correct approach, argues the State, would be to first conduct a risk assessment and consequences analysis and then determine the appropriate amount of coverage based on the analysis. *See id.* at 48.

3.95 Unless required by a future NRC regulation, the State notes that under no circumstances would PFS obtain an amount of coverage if the insurance were not available at a reasonable cost and on reasonable terms. *See id.* at 47. This, according to the State, demonstrates that PFS is less concerned with having adequate onsite property insurance than it is with its ''bottom line.'' *See id.* The State avers that because PFS has not related the financial ramifications of a major accident to any risk or consequences analysis, there is nothing in the record to support PFS's assertion that the anticipated amount of coverage will be adequate. *See id.* at 48.

3.96 Relying on 10 C.F.R. §§ 72.40(a)(5) and (6) and 72.22(e), the State contends that the Commission would be derelict in its duties to protect public health and safety by ensuring that ISFSI applicants are financially capable of engaging in their proposed license activities if the agency were to defer to PFS's business judgment as to what constituted the adequate amount of insurance coverage for the facility. *See id.* at 48-49. The State insists that the appropriate amount of insurance coverage PFS must retain is either **x x x x x x x x x x x x** or the maximum amount of onsite insurance PFS can obtain from national or international commercial nuclear insurers. *See* State Reply at 20.

3.97 In response, PFS notes that pursuant to 10 C.F.R. § 50.54(w), even reactor licensees are not required to obtain more insurance than is available at reasonable costs and reasonable terms from commercial sources. *See* PFS Reply at 38. PFS further asserts that its commitment to maintain a minimum of $70 million in coverage is based on two factors. First, the NRC has been requiring shutdown reactors with spent fuel in their spent fuel pools to maintain no more than $50 million in onsite insurance coverage. *See id.* at 38-39. Second, a report by the Brookhaven National Laboratory indicates that the cost of recovery from a bounding ISFSI accident would amount to only $6 million. *See id.* at 39. Thus, PFS argues, there is a clear link between accident recovery cost assessments and the minimum level of coverage it has committed to maintaining. *See id.*

3.98 For its part, the Staff observes that there exists no regulatory requirement or guidance under Part 72 that would require any onsite property insurance for an ISFSI. *See* Staff Reply at 38. In the Staff's view, therefore, PFS's commitment goes far beyond what is mandated by NRC regulations. *See id.* That notwithstanding, the Staff considers it appropriate and in accordance with sound business practice that PFS acquire onsite insurance coverage. *See id.* Given the language of section 50.54(w), the Staff deems PFS's commitment to obtain the maximum amount of onsite nuclear property insurance available at reasonable terms and at a reasonable cost to be sufficient. *See id.* at 39. Moreover, the Staff

asserts, pursuant to the Commission's directive in CLI-00-13, PFS's commitment will be reflected in a license condition. *See id.*

IV. FACTUAL FINDINGS AND LEGAL CONCLUSIONS

A. Findings Regarding the PFS Application and Proposed ISFSI Facility

4.1 PFS filed an application with the NRC in June 1997 pursuant to 10 C.F.R. Part 72 for a license that would allow it to construct and maintain an ISFSI for an initial 20-year period with the possibility of renewal for an additional 20 years. The PFS license application includes, among other things, a safety analysis report (SAR) and an emergency plan. The proposed ISFSI is designed to accommodate up to 4000 concrete storage casks containing sealed metal canisters holding as much as 40,000 metric tons of uranium in the form of SNF from commercial nuclear reactors. *See* Staff Exh. A, encl. at 1-1 (Dec. 15, 2000 [NRC Staff] Safety Evaluation Report of the Site-Related Aspects of the [PFS ISFSI] (as revised Jan. 4, 2000) [hereinafter Staff SER]. The planned facility is to occupy 820 acres within the confines of the 18,000-acre reservation of the Skull Valley Band in Tooele County, Utah. *See id.* While there are no large towns within a 10-mile radius of the proposed ISFSI, the thirty-resident Skull Valley Band reservation village is located about 3.5 miles east-southeast of the PFS site. *See id.* PFS plans to fund the construction, operation, and decommissioning of the facility through equity contributions of its owners and by service agreements with member and nonmember customers.[9] *See id.* at 17-3.

B. Findings and Conclusions Regarding the Parties' Witnesses

4.2 In section III.A above, we described in detail the qualifications of each party's witnesses, which we incorporate as part of our findings herein. We turn now to the weight to be accorded to each witness's testimony relative to the matters at issue.

4.3 When the qualifications of a witness are challenged, the party sponsoring the witness has the burden of demonstrating his or her expertise. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-410, 5 NRC 1398, 1405 (1977). A witness's expertise can be established by showing

[9] Although, as is apparent from our decision today on the post-CLI-00-13 remand aspects of PFS financial qualifications, the details of the mechanisms by which funding will be obtained have changed from what had been described by PFS at the time of the June 2000 evidentiary hearing, *see* LBP-05-20, 62 NRC at 194-200, the basic source of that funding, i.e., PFS member and nonmember customers, remains the same.

relevant knowledge, skill, experience, training, or education. *See Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 474-75 (1982) (citing Fed. R. Evid. 702).

4.4 To support its challenge to PFS's financial qualifications, the State proffered the testimony of Dr. Michael Sheehan. PFS challenges Dr. Sheehan's qualifications as an expert based on his lack of experience in estimating construction or operating costs for nuclear facilities or large industrial projects. *See* PFS Findings at 11; PFS Reply at 4-5. With regard to the issue of onsite property insurance coverage, PFS also claims that Dr. Sheehan has had no experience or particular knowledge in the area of nuclear insurance or with estimating the probabilities or consequences of potential radiological accidents. *See* PFS Findings at 14; PFS Reply at 5. For its part, the State asserts that Dr. Sheehan's education, knowledge, and experience as an economist are more than sufficient to evaluate the reasonableness of PFS's cost estimates and to identify omissions and uncertainties therein, as well as the reasonableness and availability of PFS's onsite property insurance. *See* State Findings at 5. Thus, the State asks that the Board give Dr. Sheehan's testimony ''the appropriate weight due him as a highly trained and experienced expert.'' *Id.* at 6.

4.5 The witnesses presented by PFS provide somewhat of a contrast to Dr. Sheehan by reason of their experience relating directly to cost estimation and nuclear property insurance. As we noted above, PFS witness Gase's experience as a construction engineer and a cost engineer includes estimation work on large-scale construction projects. *See* Gase/Takacs Testimony at 1-2 & attached resume. Mr. Takacs, who also testified on behalf of PFS, has a degree in construction engineering and serves as the principal cost engineer in Stone & Webster's Denver office. *See* Gase/Takacs Testimony at 2-3 & attached resume. PFS witness Parkyn has experience in estimating construction costs for nuclear power plants and activities associated with the operation of nuclear facilities, as well as knowledge of the costs of nuclear insurance for nuclear reactors. *See* Parkyn Construction Testimony at 1-3 & attached resume; Parkyn/Kaptiz O&M Testimony at 4; Parkyn Insurance Testimony at 3. Mr. Kapitz, who testified on behalf of PFS on O&M costs, has over 20 years of experience in the nuclear power industry as a nuclear engineer and is responsible for the overall project management of Northern States Power's Prairie Island ISFSI. *See* Parkyn/Kapitz O&M Testimony at 1-2 & attached resume. Mr. Pickerl has 15 years of experience in the nuclear insurance industry procuring and administering insurance for nuclear industry clients. *See* Pickerl Testimony at 1-2 & attached resume.

4.6 Staff witnesses McKeigney and Wood also possess impressive knowledge and expertise directly relevant to the determination of an applicant's financial qualifications. As part of his duties as a Financial Analyst in the NRC's Office of Nuclear Reactor Regulation, Dr. McKeigney determines whether the financial

assurances provided by applicants are in compliance with the agency's regulations. *See* McKeigney/Wood Testimony at 1-2 & attached resume. Mr. Wood, who has nearly 30 years of experience with the NRC, serves as a Senior Level Licensee Financial Policy Advisor. *See id.* In this capacity, Mr. Wood develops and implements NRC policies on nuclear property insurance and the financial qualifications of NRC licensees. *See id.*

4.7 The Board is cognizant of Dr. Sheehan's skills and 20 years of experience as an economist, *see* Sheehan Testimony at 1-4 & attached resume, as well as his admitted lack of experience in the areas of cost estimation and nuclear property insurance. *See* Tr. at 2202-07, 2219-22, 2492, 2505-08. In this regard, we find Dr. Sheehan to be well qualified as an expert in the field of economics and accord his testimony appropriate weight commensurate with its merits. We also find that PFS and the Staff have established the expertise of their witnesses relative to cost estimation and nuclear property insurance.

C. Findings and Conclusions Regarding Applicable Legal Standards

1. Construction and Operating Cost Estimates

4.8 As we observed in section III.B.1 above, pursuant to 10 C.F.R. § 72.22(e), an applicant for an ISFSI license must submit information sufficient to demonstrate that it is financially qualified to carry out the activities for which the license is sought. In this regard,

> [t]he information must show that the applicant either possesses the necessary funds, or that the applicant has reasonable assurance of obtaining the necessary[ ] funds or that by a combination of the two, the applicant will have the necessary funds available to cover the following:
>
> (1) Estimated construction costs; [and]
>
> (2) Estimated operating costs over the planned life of the ISFSI . . . .

10 C.F.R. § 72.22(e).

4.9 As the Applicant, PFS bears the ultimate burden of proof in this licensing proceeding. *See* 10 C.F.R. § 2.732. Furthermore, to prevail on each factual issue, the PFS position must be supported by a preponderance of the evidence. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-763, 19 NRC 571, 577, *review declined,* CLI-84-14, 20 NRC 285 (1984). Therefore, relative to contention Utah E/Confederated Tribes F, PFS must demonstrate by a preponderance of the evidence that it has established the requisite reasonable assurance in connection with its estimated construction costs and the estimated operating costs over the planned life of the facility. Thus, the meaning of ''reasonable assurance'' becomes central to our determination of PFS compliance with NRC regulations, a matter to which we look to the Commission for guidance.

4.10 In CLI-00-13, 52 NRC at 31, in clarifying what a showing of ''reasonable assurance'' would entail for an ISFSI applicant, the Commission acknowledged that outside of the Part 50 reactor licensing context, while the financial qualifications of the applicant would still be considered, the Commission would not hold the applicant to the specific requirements of showing financial capability under Part 50. Nonetheless, as the Commission noted:

Even when evaluating financial assurance under Part 50,

> The Commission will accept financial assurances based on plausible assumptions and forecasts, even though the possibility is not insignificant that things will turn out less favorably than expected. Thus, the mere casting of doubt on some aspects of proposed funding plans is not by itself sufficient to defeat a finding of reasonable assurance.

See id. (quoting *Seabrook,* CLI-99-6, 49 NRC at 222). Further, the Commission confirmed that in the context of an ISFSI licensing proceeding, license conditions could be an acceptable method for providing reasonable assurance of an applicant's financial qualifications under 10 C.F.R. Part 72. *See id.* at 29.

4.11 The *Seabrook* language referenced above concerned a reasonable assurance finding relating to funding plans and revenue. Contention Utah E/Confederated Tribes F, however, is concerned with the adequacy of PFS cost estimates, rather than with its funding plan per se. Nonetheless, all parties apparently agree that the *Seabrook* principles apply to PFS cost estimates. *See* PFS Findings at 19; PFS Reply at 7; Staff Reply at 11; State Findings at 8; State Reply at 3. That is, the parties agree that the Commission will accept cost estimates based on plausible assumptions and forecasts, and that merely casting doubt on some aspects of the estimates will not be adequate to preclude a finding of reasonable assurance.

4.12 In addition, in the decommissioning context, the Commission has provided what we perceive as useful guidance regarding challenges to an applicant's cost estimates, albeit in the context of determining what a petitioner must establish to gain admission of a contention contesting an applicant's decommissioning plan cost estimates. In the *Yankee Rowe* proceeding, the petitioners claimed before the Licensing Board that the applicant's decommissioning cost estimate was inadequate because it was based on unreasonable assumptions, allowed for a grossly inadequate contingency factor, and was missing certain costs. *See Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 81 (1996). In approving the Licensing Board's rejection of the petitioners' contention, the Commission observed that ''a contention challenging the reasonableness of a decommissioning plan's cost estimate provisions should not be litigable if the only relief available would be a 'formalistic redraft of the plan with a new estimate.' '' *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 259 (1996) (quoting *Yankee Atomic Electric Co.* (Yankee Nuclear Power

Station), CLI-96-1, 43 NRC 1, 9 (1996)). The Commission noted, however, that if the petitioners could show a ''gross discrepancy'' in the decommissioning cost estimate, that might suffice to establish a litigable issue.[10] *Id.* at 260.

4.13 Bearing in mind this Commission guidance, we find that to demonstrate reasonable financial assurance, PFS must provide reasonable cost estimates based on plausible assumptions and forecasts, and estimates that ''rely on assumptions seriously at odds with governing realities'' will not be acceptable. *Seabrook,* CLI-99-6, 49 NRC at 222. We also find that to succeed on the merits of its contention, the State must demonstrate that ''relevant uncertainties significantly greater than those that usually cloud business outlooks'' exist. *See id.* In addition, the Board will not entertain what amounts to a State request for a ''formalistic redraft'' of the PFS plan with new cost estimates, but rather is concerned as to whether the State demonstrates there are ''gross discrepancies'' in those estimates. *Yankee Rowe,* CLI-96-7, 43 NRC at 259, 260.

4.14 Also in controversy is the level of precision required in the accuracy of PFS cost estimates. While the State argues that PFS must provide ''hard'' cost estimates that are ''reasonably firm and precise,'' Tr. at 2224; *see* State Reply at 8; Sheehan Testimony at 8, PFS and the Staff assert that the Commission's use of the term ''hard'' in its *Claiborne* decision appears to describe cost estimates relative to items such as physical structures, rather than ''soft'' costs, such as interest and financing costs. *See* PFS Findings at 32; Staff Findings at 26. In our view, the *Claiborne* decision does not support the State's interpretation of the term ''hard construction costs,'' which we conclude refers to the category of costs covered by the estimates rather than the level of precision required for each and every estimate, regardless of its type. Thus, we do not believe PFS need await the actual contract ''bid'' information Dr. Sheehan maintained was necessary, *see* Tr. at 2233, before preparing its cost estimates for Part 72 financial assurance purposes.

2. Onsite Property Insurance Coverage

4.15 As was noted above in section III.B.2, NRC regulations require operating reactor licensees to ''take reasonable steps to obtain insurance available at reasonable costs and on reasonable terms from private sources.'' 10 C.F.R. § 50.54(w). Part 50 further mandates that reactor licensees maintain a mini-

[10] In earlier guidance, the Commission had explained that to prevail, the petitioners would have to demonstrate ''not only that the estimate is in error but that there is not reasonable assurance that the amount will be paid.'' *Yankee Rowe,* CLI-96-1, 43 NRC at 9. As we have previously indicated, however, the manner in which PFS costs will be covered generally is outside the scope of the portion of this contention concerning the reasonableness of PFS cost estimates that was the subject of the June 2000 evidentiary hearings.

mum coverage of $1.06 billion, or the amount generally available from private sources, whichever is less. *See id.* § 50.54(w)(1). By contrast, there is no similar requirement under Part 72 for ISFSI licensees to procure insurance. PFS, however, has committed to maintaining onsite property insurance coverage in the maximum amount ''available at reasonable costs and at reasonable terms from private sources.'' *See* Parkyn Insurance Testimony at 4. While the amount of coverage PFS should obtain is disputed by the parties (a factual determination that we discuss below in section IV.G), the legal question of whether PFS must maintain insurance at all was resolved by the Commission in CLI-00-13. In that decision, the Commission required PFS to obtain onsite insurance in an amount to be determined at hearing as a condition on its ISFSI license. *See* CLI-00-13, 52 NRC at 36.

3. Impacts of CLI-00-13

4.16 As we noted in section II above, in addition to endorsing the use of license conditions in CLI-00-13, the Commission approved the use of LC-1, a revised license condition LC-2, and Staff memorialization of six additional conditions. CLI-00-13, 52 NRC at 32, 36. The Commission further instructed the Board to require PFS to provide a sample customer service agreement that met these financial assurance license conditions and to give the State an opportunity to address the adequacy of the sample agreement. *See id.* at 35.

4.17 Pursuant to the Commission's directives, we ordered PFS to submit a sample service agreement for review by the Board and the other parties. *See* Licensing Board Order (Schedule for Submission of Sample Service Agreement) (Aug. 16, 2000) at 1-2 (unpublished). Additionally, as is described in section II above, the Board also requested that the parties address the impacts of CLI-00-13 upon the matters that were the subject of the June 2000 evidentiary hearings, which the parties did. Relative to the portions of contention Utah E/Confederated Tribes F that were the subject of those hearings, we resolve the matters raised in the parties' filings, to the degree they are not dealt with below, in the context of our separate decision today on the pending PFS dispositive motion regarding the adequacy of its MSA in meeting the PFS financial assurance obligations. *See* LBP-05-20, 62 NRC 187 (2005); *see also supra* note 7.

D. Findings and Conclusions Regarding General Standards That Apply to PFS Cost Estimates

1. Project Planning Deficiencies as Affecting Cost Estimates

4.18 Before considering the individual components included in the construction and O&M cost estimates, we first address the State's general concern that

substantial uncertainty about many of the important planning elements such as what is to be built, when it is to be built, how much it will cost to build, and where will the money come from are critical because ''[e]ven a five percent error in estimation due to [an] insufficiently specified project design could result in a multi-million dollar shortfall during construction or operation of the ISFSI,'' which the State suggests could in turn induce PFS to ''cut corners'' on safety. State Findings at 9.

4.19 Given the PFS cost estimate focus of this contention as it was subject to litigation before the Board in June 2000, the relevance of the various planning factors the State seeks to interpose is not apparent, other than to the extent they are interposed as a specific concern in connection with a particular cost estimation element. Moreover, consistent with the Commission's decision in *Yankee Rowe,* there is an element of materiality that must be considered, i.e., evidence that indicates some ''gross discrepancy'' relative to a cost estimate item or items. *See* CLI-96-7, 43 NRC at 260. As is explained below in further detail, to the extent the State has sought to raise these planning items relative to particular cost estimate elements, we find that it has not identified any material errors in the PFS cost estimates that would render them unreasonable.

2. Passthrough Costs

4.20 The State also claims that by labeling certain expenditures as ''pass-through costs'' that PFS will pass directly to its customers, PFS and the Staff have grossly underestimated the overall costs of the proposed facility. *See* State Findings at 12. The State insists that PFS account for these passthrough costs in its estimates. *See id.* at 12-13. Relying on the Commission's decision in *Monticello,* CLI-00-14, 52 NRC at 49-51, however, PFS argues that it need not provide specific estimates of the costs it plans to pass through to customers. *See* PFS Reply at 15.

4.21 As we explain today in our ruling on the PFS dispositive motion, *see* LBP-05-20, 62 NRC at 234-35, in accordance with the Commission's guidance in *Monticello, see* CLI-00-14, 52 NRC at 51, we find that PFS's use of passthrough provisions in its MSA offers reasonable assurance that its construction and O&M costs will be covered by incoming revenue. Relative to the contention at issue, however, which concerns only the reasonableness of the estimated costs of the proposed facility, although *Monticello* might well relieve PFS of its obligation to provide a specific estimate of the costs it intends to pass through to its customers, *see id.* at 50, as will be discussed further below, we find that PFS has nonetheless appropriately accounted for these passthrough costs in its estimates.

4.22 With these general considerations in mind, we now assess the reasonableness of PFS's construction and O&M cost estimates.

E. Findings and Conclusions Regarding Construction Cost Estimates

1. Total Construction Costs

4.23 Construction of the PFS facility is expected to occur in three phases. *See* Parkyn Construction Testimony at 4-5. During Phase I, the structures, systems, and components necessary for the operation of the minimum planned initial capacity storage facility — 10,000 MTU — will be constructed. *See id.* Included in Phase I are costs associated with: (1) 130 concrete storage pads and the associated site work, yard lighting, perimeter fence, and security system; (2) the CTB; (3) the Balance of Facility — water supply, waste disposal, site access road, Security and Health Physics Building, Administration Building, and Operations and Maintenance Building; (4) the Low railroad line (assuming that PFS, as currently planned, selects the all-rail transportation alternative); and (5) railroad transportation equipment and other equipment. *See id.* PFS estimates the cost of construction for Phase I to be **x x x x x x x x x x x x x x x** (in fourth quarter 1999 dollars), *see id.* at 5, plus an additional **x x x x x x x x x x** for associated administrative costs during this phase, *see* Tr. 1962, 1979-83, for a total cost of **x x x x x x x x x x x x x x x** for Phase I (in fourth quarter 1999 dollars).

4.24 Phase II of the construction will include all site work, concrete work, lighting, and perimeter fence necessary to add 120 additional storage pads, which will increase the facility's capacity to 20,000 MTU, as well as the purchase of additional railroad transportation equipment. *See* Parkyn Construction Testimony at 5. According to PFS, the cost of Phase II construction is estimated to be **x x x x x x x x x x x x x** (in fourth quarter 1999 dollars). *Id.*

4.25 Phase III construction costs include all site work, concrete work, lighting, and perimeter fence necessary to add the final 250 storage pads, which would bring the facility to its maximum storage capacity of 40,000 MTU. *Id.* PFS estimates the cost of Phase III construction to be **x x x x x x x x x x x x x x** (in fourth quarter 1999 dollars). *Id.* Thus, according to PFS estimates, total construction costs for the facility are approximately $172.3 million (in fourth quarter 1999 dollars).

2. PFS Methodology

4.26 The cost estimates for the structures and site work at the facility — including the four buildings, the Low rail line, and structures at the ITF — were based on preliminary and structural drawings and design criteria. *See* Gase/Takacs Testimony at 4; PFS Exh. K. Included in the structures and site work construction estimates are the costs of labor and materials for constructing the structures, as well as the cost of procuring all of the equipment to be used to operate the facility (except for the casks and canisters, which are included in the O&M estimates). *See* Gase/Takacs Testimony at 4; PFS Exh. D (PFS Construction Estimate).

The estimates for the structures and site work were priced using the Means' and Richardson's cost manuals, Stone & Webster's construction cost database, past studies done on this and other recent projects, and vendor quotations. *See* Gase/Takacs Testimony at 4-5. The Means' and Richardson's data relied on by PFS's witnesses are generally accepted throughout the construction industry. *See id.* In addition, the Stone & Webster database is constantly being updated and, as part of a major update in 1999, every single item in the database was reviewed. *See* Tr. at 1701-02.

4.27 Estimating judgment and experience were used to develop ''allowances'' for specific components of the facility for which detailed information was not available. *See* Gase/Takacs Testimony at 5. According to PFS, these allowances are conservative estimates based on typical requirements for a project prior to the availability of design drawings. *See id.* It is standard engineering practice to use allowances in preparing cost estimates for those aspects of a project whose design is still in the conceptual stage. *See id.*

4.28 To estimate the costs for rail and other transportation equipment, other loading system equipment (such as transfer casks and miscellaneous equipment), the dry transfer system, the cask hauler, the visitor's center, and other capital expenses associated with the facility, PFS relied upon information generally available in the rail industry, bids and other information from vendors, and actual and projected costs from other facilities. Parkyn Construction Testimony at 6. Experience and engineering judgment were used to scale up or down costs of pieces of equipment similar to that which will be used at the PFS facility (e.g., spent fuel transfer casks and dry transfer equipment). *See id.* at 8-9, 11; Tr. at 1879-80, 1917-20.

4.29 In addition, PFS included a 10% contingency in all construction cost estimates to account for changes in design and unanticipated project costs. *See* Gase/Takacs Testimony at 5. A contingency of 10% is consistent with standard estimating practice for the level of detail of this cost estimate for this type of work. *See id.*

4.30 The State nonetheless expressed concern that PFS could have underestimated the cost of construction by as much as 15%. *See* State Findings at 17. During the hearing, Mr. Takacs speculated that the range of accuracy in the cost estimates he and Mr. Gase arrived at would range from –15% to +25%. *See* Tr. at 1707. He also testified that for a budget or preliminary estimate, the –15% to +25% range is considered by the American Association of Cost Engineers to be an approximate range of accuracy, and that he expected the actual construction costs of the facility to be lower than what he and Mr. Gase had projected. *See id.* at 1749. On the basis of this testimony, we find the methodology used by PFS in deriving its construction cost estimate to be reasonable.

4.31 PFS's construction and administrative cost estimates for Phase I of the proposed facility are broken out by category as follows:

Construction Cost Category	**Total**	**% of Total**
Site Work	**xxxxxxxxxx**	**xxx**
Yard Electrical Work	**xxxxxxxxxx**	**xxx**
Security Equipment	**xxxxxxxxxx**	**xxx**
Canister Transfer Building	**xxxxxxxxxxx**	**xxxx**
Concrete Storage Pads	**xxxxxxxxxxx**	**xxx**
Water and Sanitary	**xxxxxxxx**	**xx**
Roads and Parking	**xxxxxxxxxx**	**xxx**
Security and Health Physics Building	**xxxxxxxxxx**	**xxx**
Administration Building	**xxxxxxxxxx**	**xxx**
Operations and Maintenance Building	**xxxxxxxxxx**	**xxx**
Low Railroad	**xxxxxxxxxxx**	**xxxx**
Rail and Other Transportation Equipment	**xxxxxxxxxxx**	**xxxx**
Other Loading System Equipment (Transfer Casks and Miscellaneous Equipment)	**xxxxxxxxxx**	**xxx**
Dry Transfer System	**xxxxxxxxxx**	**xxx**
Cask Hauler	**xxxxxxxxxx**	**xxx**
50-ton Mobile Crane	**xxxxxxxx**	**xx**
Visitor's Center	**xxxxxxxx**	**xx**
Other Capital Expenses	**xxxxxxxx**	**xx**
Contingencies	**xxxxxxxxxx**	**xxx**
Administrative Costs	**xxxxxxxxxx**	**xxx**
Total	**xxxxxxxxxxxx**	**xxxxx**

See PFS Findings at 23-24 (citing Gase/Takacs Testimony at 7-19, Parkyn Construction Testimony at 6-12); Parkyn Construction Testimony at 13-15; Tr. at 1962.

3. State Concerns

4.32 The State does not challenge the following components of the PFS Phase I construction cost estimate — (1) site work, (2) yard electrical work, (3) security equipment, (4) cask storage pads, (5) water and sanitary, (6) roads and parking, (7) Low railroad construction, (8) cask hauler, (9) visitor's center, (10) other capital expenses, and (11) administrative costs. Thus, we do not discuss those categories in depth. We have examined the bases of the estimates proffered by PFS for the above eleven categories, *see* PFS Findings at 24-31, and find them to be reasonable. The State does, however, dispute certain aspects of the remaining nine components, and we consider these in further detail below.

a. Canister Transfer Building and Crane Seismic Qualification Costs

4.33 The State argues that because the particular seismic code under which the CTB and 50-ton mobile crane are qualified is unknown, and because no additional funds have been set aside for potential seismic design upgrades, PFS's construction cost estimates are uncertain. *See* State Findings at 15.

4.34 Relative to the CTB, PFS witness Takacs testified that seismic information, reflected in the amount of concrete and reinforcement required, was incorporated into the structural drawings he used to derive his cost estimate for the building. *See* Tr. at 1711. Mr. Takacs further testified that the vendor had seismically qualified the crane before quoting the price to Stone & Webster. *See id.* at 1750. Because seismic considerations were contemplated in both the CTB and crane estimates and the State did not proffer any evidence concerning the extent to which the cost estimates would be impacted materially if seismic design upgrades were necessary,[11] we find the construction cost estimates for the CTB and the crane reasonably take into account seismic concerns.

b. Building Estimates Based on Preliminary Information

4.35 The State objects to the use of conceptual renderings, which represent the earliest stage of the design process, by Mr. Gase and Mr. Takacs in their preparation of the construction cost estimates for most of the proposed buildings. *See* State Findings at 15-17.

4.36 During the design process, the level of detail represented in a drawing becomes progressively more precise in the following general order: conceptual, structural, preliminary, detailed, and finally, construction drawings. *See* Tr. at 1696-97. Mr. Gase and Mr. Takacs testified that the cost estimate for the CTB was

[11] Mr. Takacs, on the other hand, testified that buildings requiring seismic considerations would cost ''a little bit more'' than those in nonseismic areas. Tr. at 1710.

based on structural drawings, which include the floor plan, exterior elevations, electrical one-line diagram, and design criteria for the building. *See* Gase/Takacs Testimony at 10; *see also* PFS Exh. K. With regard to the facility's three remaining proposed buildings, although PFS's witnesses initially labeled the drawings used in the estimates as conceptual drawings, *see* Gase/Takacs Testimony at 14-17, Mr. Takacs later characterized them as preliminary drawings. *See* Tr. at 2612-13, 2615. Mr. Takacs further testified that the drawings and dimensions of the four proposed buildings given to him were adequate for him to determine the quantities of material and labor necessary to construct the buildings. *See id.* at 1748. According to PFS, the construction costs estimated for the four proposed buildings are not only reasonable when compared against construction industry cost data for buildings of similar types on a dollar per square foot basis, *see* Gase/Takacs Testimony at 11, 15-17, but are also likely to be overconservative. *See* Tr. at 2611.

4.37 Although the State took issue with the lack of detail in the drawings, rather than pointing to a specific deficiency in the cost estimates it merely suggested that the lack of detail led to little confidence in the estimates. *See* State Findings at 17. Based on the testimony of Mr. Takacs and Mr. Gase, we find that the construction cost estimates for the CTB, the Security and Health Physics Building, the Administration Building, and the Operations and Maintenance Building are reasonably derived from structural and preliminary drawings.

c. Rail Equipment

4.38 The State also takes issue with the PFS plan to acquire used or refurbished rail equipment. *See* State Findings 21. Although the State points out that new rail equipment costs substantially more than used or refurbished rail equipment, *see* State Findings at 21-22, that fact alone does not invalidate the PFS cost estimates. The estimates for the used rail equipment were derived from the cost to purchase and refurbish a unit currently in service. *See* Parkyn Construction Testimony at 7-8. To the extent the State suggests that used equipment may require additional maintenance or replacement over the term of the facility's license, Mr. Parkyn testified that used locomotives were highly reliable, *see* Tr. at 1862, and, with proper maintenance, could be operated indefinitely, *see id.* at 1891-92. Mr. Parkyn further testified that PFS did not anticipate replacing its rail equipment over the term of the facility's license. *See id.* at 1893. Moreover, Mr. Parkyn declared there is no increased safety risk associated with the use of refurbished equipment as opposed to new equipment. *See id.* at 1875, 1893. The State did not challenge or refute Mr. Parkyn's testimony on any of these points.

4.39 In addition, the State insists that any costs for maintenance, upkeep, and fueling of the rail equipment — **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** — must be included in the PFS cost

estimates. *See* State Findings at 22-23. Mr. Parkyn testified that maintenance and fueling costs for the locomotives are considered transportation costs. *See* Tr. at 1862, 1971, 2072. **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x,** PFS estimated the costs associated with the transportation of SNF to the facility to be **x x x x x x x x x x x x** over a 40-year license term. *See* Parkyn/Kapitz O&M Testimony at 13. These estimates are proportional to the actual distance shipped and were developed based on discussions with staffs of the Union Pacific Railway and the Burlington Northern Railway, using a distance from a Midwest reactor site. *See* Parkyn/Kapitz O&M Testimony at 13-14.

4.40 The State also claims that the use of used rail cars as buffer cars appears to be inconsistent with PFS's ''start clean, stay clean'' philosophy, in that the cars may not be contaminant-free when purchased by PFS. *See* State Findings at 23. Mr. Parkyn testified, however, that the used cars would not have been exposed to radioactive material and would not have been used to transport hazardous material. *See* Tr. at 1873-74. Putting aside the fact that this State concern seemingly has nothing to do with the reasonableness of PFS cost estimates, we conclude that the PFS evidentiary presentation was adequate to establish the sufficiency of this aspect of its rail equipment cost estimates.

4.41 Thus, **x x,** we find that PFS has appropriately accounted for and reasonably estimated the costs of rail equipment for the proposed facility.

d. Cask Transfer Systems

4.42 The State also challenges the PFS estimate for the cost of the spent fuel transfer cask, which it asserts is inadequate because it was based on a comparison with a spent fuel transportation cask. *See* State Findings at 24. PFS estimates each transfer cask to cost **x x x x x x x x,** based on a comparison to the estimated cost of the transportation cask, which costs approximately **x x x x x x x x x x.** *See* Parkyn Construction Testimony at 9. Compared to the transportation cask, the transfer cask is a simpler shielding cask used onsite to transfer the loaded fuel canister from the shipping cask to the storage cask. *See id.* The State did not present any evidence showing that PFS's estimate for the transfer cask was inaccurate. Therefore, we find the PFS cost estimate for the spent fuel transfer casks to be reasonable.

4.43 The State did claim, however, that because the dry transfer system will need to be specially designed for the proposed facility, PFS must account for the costs of designing and licensing the system as part of its financial assurance

showing. *See* State Findings at 24-25. Mr. Parkyn testified, however, that PFS was paying for the design and certification costs of the system out of precollected PFS member subscription fees as part of PFS prelicensing activities, *see* Tr. at 1917, 1924, and that the design of the system would be completed well before the start of construction of the facility.[12] During the evidentiary hearing, the Board ruled that preconstruction activities are outside the scope of PFS's construction costs. *See* Tr. at 1742. Thus, we find that PFS need not include the design and licensing costs associated with the dry transfer system incurred during the preconstruction period.

e. Omitted Construction Costs

(i) DESIGN DRAWINGS

4.44 The State also asserts that PFS must include the costs of the design drawings for the facility in its construction cost estimates. *See* State Findings at 14. As we noted above, during the course of the hearing, the Board ruled that preconstruction costs are outside the scope of the financial assurance regulations and the contention. *See* Tr. at 1742. In this regard, 10 C.F.R. Part 50 specifically allows an applicant to engage in preconstruction activities such as site exploration and the procurement or manufacture of facility components before obtaining a construction permit. *See* 10 C.F.R. § 50.10(c)(1), (2). In addition, the Part 72 regulation that requires an applicant to demonstrate reasonable financial assurance refers only to ''construction costs,'' and not to ''preconstruction costs.'' *See id.* § 72.22(e).

4.45 The State also relies on the Commission's *Claiborne* decision, in which the Commission observed that the construction costs of the facility included ''owners' costs back to the beginning venture phase.'' *See* CLI-97-15, 46 NRC at 306 n.16. The *Claiborne* decision does not, however, require the applicant to include costs going back to the venture phase of the project. Rather, as we read it, the Commission was merely recounting what items the applicant had

[12] *See* Tr. at 1921-23. The State introduced into evidence a letter from Holtec International stating that Holtec has yet to identify two PFS member reactor sites that perform fuel loading in the same manner. *See* State Exh. 20 (Letter from Stephen Agace, Operations Manager, Holtec International, to Dr. Max DeLong, Executive Engineer, Northern States Power Co. (Dec. 12, 1998)). According to the State, this letter demonstrates that the design of the dry transfer system will be complicated and, contrary to Mr. Parkyn's testimony, may not be completed during the preconstruction period. *See* State Findings at 26. Mr. Parkyn testified, however, that Holtec's claim about reactor fuel loading requirements was overstated given that the letter was intended to gain authorization to conduct studies to determine what utility cask loading practices already existed, *see* Tr. at 1911-13.

included in its cost estimate, which was not in controversy.[13] Therefore, we find that preconstruction costs, such as the costs of the design drawings of the PFS facility,[14] fall outside the scope of contention Utah E/Confederated Tribes F and need not be included in the PFS cost estimates.

(ii) CAPITAL RENEWAL COSTS

4.46 The State claims that PFS's construction cost estimates are inadequate in that they do not take into account the cost of capital renewal. *See* State Findings at 14. Mr. Takacs testified, however, that any necessary replacement of capital equipment would be an O&M expense. *See* Tr. at 1746. In this regard, PFS has estimated that the costs of maintenance and replacement of parts will amount to **x x x x x x x x x x x** over a 40-year license term. *See* Parkyn/Kapitz O&M Testimony at 16. The State did not challenge the maintenance and parts portion of PFS O&M cost estimates. We find, therefore, that PFS having appropriately and reasonably estimated the costs for capital renewal, albeit as a component of O&M costs, did not need to include these as a construction cost element.

(iii) BREACHED OR DEFECTIVE CANISTER OVERPACKS

4.47 The State challenges the PFS plan to deal with breached or defective storage canisters. Specifically, it objects to the omission of two breached canister overpacks from the most recent PFS construction budget and to the potential safety and/or regulatory consequences of storing defective canisters onsite. *See* State Findings at 19-20.

4.48 PFS witness Parkyn testified that the canister overpacks were eliminated from the construction budget because there was no regulatory requirement for such an overpack. *See* Tr. at 1898, 1900. In the event of a breached canister, PFS intends to house the breached canister in one of the six Hi-Star transportation casks — which it considers a stronger containment vessel than a canister overpack (*see id.* at 1903) — it plans to purchase. *See id.* at 1899. Mr. Parkyn testified that if it were necessary, a Hi-Star cask could be taken out of service and used to store the breached canister as long as needed. *See id.* at 1899-1900. If necessary, PFS would purchase an additional transportation cask, estimated at **x x x x x x x x x x** each, *see* Parkyn Construction Testimony at 7, using funds from its

[13] *See id.* (''Hard construction costs of the [facility] are in 1992 dollars and include the cumulative construction costs of the centrifuges, and owners' costs back to the beginning venture phase. The amount does not include the interest accrued during construction, escalation costs, financing costs, and decommissioning costs.'')

[14] We note also that, notwithstanding the Board's offer to allow proffers regarding preconstruction costs, *see* Tr. at 1762, the State did not provide any evidence quantifying those costs so as to establish their materiality.

10% contingency fund. *See* PFS Reply at 21; *see also* Tr. at 1940-41 (noting contingency funds not allocated for any specific purpose and can be used for any unexpected expenditure). Based on the evidentiary record, the PFS plan to deal with breached canisters appears reasonable so that the elimination of canister overpacks from the construction cost estimate likewise was reasonable.[15]

(iv) INTEREST DURING CONSTRUCTION

4.49 The State also argues that all interest payments that PFS makes during the construction period on loans that PFS may procure for its customers must be included in the construction cost estimates. *See* State Findings at 27. **x x.** *See* Parkyn/Kapitz O&M Testimony at 24-25; Tr. at 1935, 2077-78. **x x.**[16] We thus find the exclusion of interest payments from PFS construction cost estimates to be reasonable.

[15] With regard to the possible regulatory implications of storing breached canisters at reactor sites, we find that the State's concern falls outside the scope of this contention, which is narrowly focused on the reasonableness of the PFS cost estimates and amount of onsite property insurance coverage.

[16] **x x.**

f. Contingencies

4.50 The State contends that the 10% contingency PFS has allotted in its construction cost estimate will not be sufficient to cover unanticipated costs or costs caused by delays during construction. *See* State Reply at 11-12. Mr. Parkyn testified that the contingency estimate for PFS is comparable to those of general construction projects in which most of the work is prebid. *See* Parkyn Construction Testimony at 12. Furthermore, because the majority of the expenditures for the proposed facility are conventional activities, bids can be acquired prior to construction, decreasing the amount of uncertainty in the costs. *See id.*; Tr. at 2008. In addition to the 10% contingency, PFS asserts that additional unexpected costs will be absorbed by conservatism in the cost estimates. *See* Tr. at 2012-13. We find that PFS's contingency estimate, coupled with the built-in conservatism in the cost estimates, is a reasonable means of dealing with unanticipated costs arising during the construction period.

g. Additional License Conditions

4.51 The State seeks the imposition of five additional conditions on the license for the proposed facility that would: (1) prohibit PFS from commencing construction until it may lawfully do so after issuance of the license; (2) specify the three phases of construction; (3) commit PFS to using the Low railroad transportation option; (4) prohibit PFS from shifting construction or operating costs to the GSLSR; and (5) include administrative costs incurred during the construction period in PFS's construction cost estimates. *See* State Reply at 5-11.

4.52 In a different context in this proceeding — relative to contention Utah R, Emergency Plan — the State sought license conditions that would incorporate certain fire safety commitments made by PFS as express conditions of PFS's license. *See* LBP-00-35, 52 NRC 364, 409-10 (2000), *petition for review denied,* CLI-01-9, 53 NRC 232 (2001). In declining to impose the requested license conditions, this Board noted that the conditions at issue were statements made by PFS in the course of its proposed findings, based on statements made by its witnesses under oath before the Board or as part of its application. *See id.* at 410. We were satisfied that those statements indicated a commitment on the part of PFS to comply with the relevant fire safety standards and saw little purpose in repeating those assurances as license conditions. *See id.* In denying the State's request for review of the Board's ruling, the Commission rejected the notion that all commitments made by the Licensee must be memorialized as express license conditions in order to be enforceable. *See* CLI-01-9, 53 NRC at 235. Regarding its ruling in CLI-00-13 relative to financial assurance, the Commission explained that when PFS sought to establish its financial qualifications through customer service agreements, certain provisions were appropriately incorporated

as conditions in the license to simplify Staff review of compliance. *See id.* In the same vein, the Commission advised that its decision in CLI-00-13 ''should not be read to suggest that promises and representations made to NRC Staff and NRC hearing boards are meaningless if they are not reiterated in the license.'' *Id.*

4.53 In this light, we find that additional license conditions are unnecessary, based on statements made by PFS under oath and/or on the record during the hearing process. For example, counsel for PFS stipulated — and the State accepted — on the record that PFS would not begin construction on the facility until after the issuance of the license. *See* Tr. at 1978. In addition, Mr. Parkyn testified that the construction phases would consist of 10,000 MTU capacity in each of Phases I and II and of 20,000 MTU in Phase III. *See* Parkyn Construction Testimony at 4-5. With respect to cost shifting, PFS construction and O&M cost estimates have included rail and other transportation-related charges that might conceivably be incurred by the GSLSR in those phases. *See* Gase/Takacs Testimony at 18; Parkyn Construction at 6-8; Parkyn/Kapitz O&M Testimony at 13-14. Furthermore, Mr. Parkyn testified that PFS would not shift construction costs to the railroad. *See* Tr. at 1965. Mr. Parkyn also testified that administrative costs incurred during the construction period would be part of the PFS showing to the Staff under LC-1 and would, therefore, be considered construction costs. *See* Tr. at 1962. Based on the foregoing statements and testimony, we are satisfied PFS has made commitments and representations that cover these items and that those commitments are such that license conditions are unnecessary relative to any future Staff enforcement.

4.54 In connection with the State's requested transportation license condition, PFS witnesses testified that PFS would construct and operate either the Low rail line or the ITF, with the Low rail line being the preferred alternative. *See* Tr. at 2104; Gase/Takacs Testimony at 18. PFS witnesses also testified that its construction and O&M estimates include the costs associated with the Low rail line option, which is the more expensive alternative. *See* Gase/Takacs Testimony at 18; Tr. at 2155-56. Because we find, based on this showing, that the PFS transportation cost estimates are reasonably conservative, at this time we likewise find it unnecessary to impose a license condition on PFS requiring it to choose a transportation alternative.

h. Staff Review of Construction Cost Estimates

4.55 The State also challenges the Staff's evaluation of PFS's construction cost estimates, taking issue with what it views as the Staff's ''wholesale acceptance'' of PFS's estimates. *See* State Findings at 28, 29. We note, however, that the adequacy of the Staff's safety review is not relevant to the issue of whether a license application should be approved. *See Curators of the University of Missouri* (TRUMP-S Project), CLI-95-1, 41 NRC 71, 121 (1995). Because it is the Applicant, rather than the Staff, that bears the burden of proof with

respect to safety issues, ''in adjudications, the issue for decision is not whether the Staff performed well, but whether the license application raises health and safety concerns.'' *Id.,* CLI-95-8, 41 NRC 386, 396 (1995).[17]

4. Summary of Construction Cost Estimates

4.56 In sum, the Board finds that, in accord with 10 C.F.R. § 72.22(e)(1), PFS has provided reasonable estimates of the costs to construct the proposed facility. The estimates are based on reasonable methodologies and are adequately supported by the preponderance of the evidence in the record, including the testimony of several witnesses with nuclear facility cost estimating expertise. Pursuant to the Commission's order in CLI-00-13, we find that PFS may not commence construction before obtaining funding commitments in the amount of **x x x x x x x x x x x x** (to be escalated (1) from fourth quarter 1999 dollars to present-day value, and (2) per the factors specified in MSA Schedule 5).

F. Findings and Conclusions Regarding Operating and Maintenance Cost Estimates

1. Total Estimated O&M Costs

4.57 PFS's total O&M costs for the proposed facility are estimated at $2.88 billion (in 1997 dollars) over a 40-year period,[18] for an average of about $72 million per year (in 1997 dollars). *See* Parkyn/Kapitz O&M Testimony at 6. This figure assumes two 20-year license terms and the storage of 40,000 MTU. *See id.* If PFS were to store 10,000 MTU (1000 casks) at the facility, rather than the 40,000 MTU (4000 casks) maximum, the primary effect would be to substantially reduce the O&M costs incurred for storage casks and canisters, which represent over 60% of the O&M budget. *See id.* at 7. PFS submits that the remaining costs would not change significantly in that many of them are either not overly sensitive

[17] Be that as it may, Staff witnesses Dr. McKeigney and Mr. Wood testified they spent a combined 600-700 hours over the 3 years prior to the hearing reviewing PFS's financial qualifications. *See* Tr. at 2602-03. During that time, they reviewed the cost of nuclear facilities and other ISFSIs to compare the key parameters of costs and steps that PFS had identified. *See id.* at 2603-04. In addition to performing a confirmatory review of the Stone & Webster construction estimates to determine whether major components were included, the Staff also reviewed the mathematical calculations involved. *See id.* at 2605. Dr. McKeigney and Mr. Wood also considered information submitted in PFS's most recent cost estimates for the fourth quarter 1999. *See id.* Thus, notwithstanding the Commission's guidance in *Curators of the University of Missouri,* we find no basis to call into question the Staff's review of the PFS construction cost estimates.

[18] This total cost figure excludes depreciation as another generalized cash flow item that does not affect a PFS operating cost or revenue. *See* Tr. at 2140-41.

to the number of canisters onsite or constitute a relatively small proportion of the O&M costs for a 40,000 MTU facility. *See id.*

4.58 PFS's O&M cost estimates are broken out by category as follows:

O&M Cost Category	**Total**	**% of Total**
Labor	**xxxxxxxxxxx**	**xxx**
Operations Support	**xxxxxxxxxxx**	**xxx**
Canisters	$1,302,200,000	45.2
Overpacks	$608,800,000	21.1
Rail Fees	**xxxxxxxxxxxx**	**xxx**
Transportation and Storage Consumables	**xxxxxxxxxxx**	**xx**
Maintenance and Parts	**xxxxxxxxxxx**	**xxx**
Regulatory Fees	**xxxxxxxxxxx**	**xx**
Quality Assurance/Radiological/ Environmental Fees	**xxxxxxxxxx**	**xx**
Utilities	**xxxxxxxxxxx**	**xx**
Low-Level Radioactive Waste Disposal	**xxxxxxxxxx**	**xx**
Visitor's Center	**xxxxxxxxxx**	**xx**
Radiological Decommissioning	**xxxxxxxxxxx**	**xxx**
Nonradiological Decommissioning	**xxxxxxxxxxx**	**xx**
Host Payments	**xxxxxxxxxxxx**	**xxx**
Castle Rock **xxxxxxxx**	**xxxxxxxxxx**	**xx**
Utah Sales Tax	**xxxxxxxxxxxx**	**xxx**
Contingencies	**xxxxxxxxxxx**	**xx**
Total	**$2,883,493,125**	**100.0**

See PFS Findings at 39-40 (citing Parkyn/Kapitz O&M Testimony at 6-7; Tr. at 2153-54).

4.59 Relative to contention Utah E, the State does not challenge the following components of the O&M cost estimate: (1) labor; (2) operations support; (3) overpacks; (4) transportation and storage consumables; (5) maintenance and parts; (6) regulatory fees; (7) quality assurance, radiological, and environmental fees; (8) utilities; (9) low-level radioactive waste disposal; (10) visitor's center;

(11) radiological decommissioning; (12) nonradiological decommissioning; (13) Utah sales tax; and (14) contingencies. We, therefore, do not discuss those categories in depth. The Board has examined the bases of the estimates submitted by PFS for the above fourteen components, *see* PFS Findings at 40-48, and finds them to be reasonable. Below, we consider in further detail the issues raised by the State.

2. State Concerns

a. Scope of O&M Costs

4.60 The State claims that because the planned capacity of the proposed facility is 40,000 MTU, PFS must show reasonable assurance of obtaining sufficient funds to cover the estimated operating costs for a 40,000 MTU facility. *See* State Findings at 30-31. We consider the State's concern to be resolved by CLI-00-13, in which the Commission modified LC-2 to prohibit PFS from commencing operation of the facility until it had service agreements in place with prices adequate to cover the O&M costs for the ''life of the license.'' CLI-00-13, 52 NRC at 36; *see id.* at 32 (''entire term of the license''). Thus, under revised LC-2, PFS must demonstrate it has service agreements in place that will provide it with adequate funds to cover the O&M costs of the facility over a 20-year license period.

b. Relationship of Costs to the License Conditions

4.61 The State argues that LC-2 requires PFS to provide the estimated O&M costs at the time they are expected to be incurred over the planned life of the facility. *See* State Findings 32-33. In the Board's estimation, such a requirement does not come from LC-2, which only requires PFS to show that its service agreements will have prices adequate to cover the total operating costs of the facility as determined at the hearing. LC-2 also does not, contrary to the State's assertion, obligate PFS to break down its O&M cost estimates by year. Further, putting aside whether this issue of timing also falls outside the scope of the contention that only challenged the cost estimates as being ''vague, generalized, and understated,'' *see* LBP-98-7, 47 NRC at 252, requiring PFS to provide estimates for each year of operation appears to exceed Part 72 financial assurance requirements, which only direct an applicant to demonstrate reasonable assurance of obtaining the necessary funds to cover the estimated operating costs over the planned life of the ISFSI. *See* 10 C.F.R. § 72.22(e). We find, therefore, that PFS, which provided an average yearly cost figure, need not provide estimated O&M cost estimates broken down by the year in which they are expected to occur to fulfill the requirements of section 72.22(e).

4.62 In this regard, we likewise reject the State's argument that PFS must take into account when costs associated with the shipment of SNF to and from the facility, *see* State Findings at 35-36, and the costs of canisters and storage casks, *see id.* at 36-37, will be incurred.[19]

c. Unsupported Cost Estimates

4.63 The State also asserts that because PFS has failed to describe or support the basis of its O&M cost estimates, it has failed to establish the reasonableness and reliability of its estimates. *See* State Findings at 33. We find no basis for the State's assertion. For each of the eighteen categories comprising the O&M budget, PFS has provided the bases and assumptions underlying its cost estimates. *See* Parkyn/Kapitz O&M Testimony at 5-27.

d. Assumptions

4.64 The State contends that the PFS O&M costs must be estimated for the initial 20-year license period, rather than on the anticipated 40-year term. *See* State Findings at 34. An additional State concern is that the Staff will have no option but to renew PFS's license following the initial 20-year term if a permanent repository is not available and the SNF cannot be returned to the owners. *See id.*

4.65 Section 72.22(e) requires an applicant to demonstrate reasonable assurance of securing sufficient funds to cover the ''[e]stimated operating costs over *the planned life of the ISFSI.*'' 10 C.F.R. § 72.22(e) (emphasis added). Contrary to the State's argument, therefore, NRC regulations permit PFS to submit estimates based on the 40-year anticipated term of the facility. Moreover, again putting aside the question whether the State's concern relative to license renewal is within the bounds of the contention at issue, we consider it lacking as wholly speculative to the degree it is inappropriately based on uncertain events the applicant cannot prove would never happen. *See Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Unit 3), CLI-01-3, 53 NRC 22, 27 (2001).

e. Transportation Costs

4.66 The State charges that rather than providing estimated operating costs for the two transportation alternatives, PFS has merely proffered a transportation credit based on the all-rail alternative from the LaCrosse, Wisconsin, reactor to

[19] We note also that, as a factual matter, the premises of the State's concerns do not appear to be correct given the record information on potential cask production, *see* Tr. at 2090-94, and the need for PFS to purchase a second train to achieve the receipt rate of 2000 MTU per year, *see* Tr. at 2132-34.

Skull Valley. *See* State Findings at 38. In particular, the State argues that PFS has not produced any evidence establishing the operating costs for the ITF alternative. *See id.* The State also challenges the PFS plan to make the decision regarding which transportation alternative it will use only after the NRC issues PFS the license. *See id.*

4.67 PFS estimates the life-cycle O&M costs for the ITF to be **x x x x x x x x x x x x x** (in 1998 dollars), and the comparable costs for the all-rail alternative to be **x x x x x x x x x x x x x** (in 1998 dollars), based on a 40,000 MTU facility over a 40-year term. *See* State Exh. 17, at 19, 59 ([Stone & Webster], [PFSF] Transportation Study (Feb. 13, 1998)). Because the combined total life-cycle costs (construction and O&M costs) of the all-rail alternative are greater than the total life-cycle costs of the ITF option, PFS chose to incorporate the costs of the all-rail alternative into its broader **x x x x x x x x x x x x** transportation costs/railroad fees category. Tr. at 2146-47, 2155-56. While the Board recognizes that the bases provided by PFS for this category of O&M costs could have been more detailed, we note that the State has provided no evidence suggesting the PFS estimates are at all inaccurate.

4.68 In addition to its concern about the estimated costs of the ITF, the State also contends that PFS has omitted several cost components from its O&M transportation cost estimates. These costs include: (1) the cost to transport casks from reactors without onsite rail access by barge or heavy haul truck to a railhead; (2) payments to the BLM; and (3) the costs for rail line usage and fuel on the GSLSR if the all-rail alternative is chosen, or ITF employee salaries and costs of transporting casks by heavy haul truck down Skull Valley Road if the ITF option is used. *See* State Findings at 42-43.

4.69 Mr. Parkyn testified that reactor-to-railhead transportation costs, where necessary, were considered transportation costs and were included in the PFS estimates as such. *See* Parkyn/Kapitz O&M Testimony at 13; Tr. at 2146. Lease and restoration bond payments to the BLM amounting to **x x x x x x x x x x x x x x x x** per year and **x x x x x x x** per year, respectively, were also accounted for in the PFS transportation cost estimates. *See* Tr. at 2107-10. The PFS transportation cost estimates also account for costs, **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x,** for usage of the GSLSR, *see* Tr. at 2064, 2072-73, as is fuel, *see* Tr. at 1991-92, in the event the all-rail alternative is used. If, on the other hand, PFS chooses the ITF option, ITF transportation employee salaries and truck transportation costs are also accounted for as transportation costs. *See* Tr. at 2042-43, 2105-07. Thus, we find that PFS has appropriately accounted for these cost components in its transportation cost estimates.

f. Costs for Construction Loans

4.70 The State asserts that PFS has failed to include costs for the interest payments and debt financing for loans that PFS may obtain on behalf of its customers who wish to finance their construction payments. *See* State Findings at 39-40, 41. As we noted above in our discussion of PFS's construction cost estimates in section IV.E.3.e(iv), this particular concern does not constitute a material item that must be included in the PFS O&M cost estimate in order for PFS to establish it is financially qualified.

g. Host Payments

4.71 The State claims that PFS has underestimated the host payments it must make to Tooele County because PFS has unreasonably assumed that all canisters stored at the facility will belong to member utilities, which are charged a lower annual storage rate per canister by Tooele County than are nonmember utilities. *See* State Findings at 43-44. According to Dr. Sheehan's calculations, this assumption results in a $24 million understatement in PFS's host payment estimates. *See* State Exh. 37 (O&M Host Benefit Calculations for Skull Valley Band of Goshutes and Tooele County); State Reply at 17. Dr. Sheehan's calculation assumes that during the first 20 years of operation, the facility would receive 200 casks per year, and during the second 20-year license term, 200 casks would be shipped out of the facility each year. *See* Tr. at 2652. He also assumed that the first 1310 casks received and the last 1310 casks shipped from the facility would be charged the lower member rate of $2600 per cask per year, as opposed to the higher nonmember rate of $3250 per cask per year. *See* State Exh. 37. Finally, Dr. Sheehan assumed that the annual storage capacity remained at a minimum of 500 MTU, and an annual base fee of $500,000 per year for a 40-year operating period. *See id.* Neither PFS nor the Staff challenges Dr. Sheehan's assumptions or calculations.

4.72 Mr. Parkyn explained that PFS's calculations took into account only the lower member rate rather than the higher nonmember rate because at the time the calculation was made, there were no signed agreements between PFS and Tooele County or between PFS and nonmember utilities. *See* Tr. at 2680. Although PFS maintains that the higher nonmember fees charged by Tooele County would be more than offset by the higher revenues that PFS would collect from the nonmember utilities, *see* Tr. at 2673-78, we find that the amount of incoming revenue is irrelevant to this contention, which is concerned only with the reasonableness of PFS's cost estimates.[20] The amount is relevant, however, as

[20] In this regard, however, we note that this fee would be covered as an O&M cost that would be **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** under MSA section 13.4 and Schedule 4.

an O&M cost that must be accounted for in the total PFS O&M costs over the life of the license, which we do in section IV.F.3 below.

h. Castle Rock **x x x x x x x x**

4.73 The State contends that PFS's O&M estimates are deficient not only because PFS has omitted payments totaling **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** but also because the timing of the payments cannot be determined at this time. *See* State Findings at 44-45. Contrary to the State's assertion, however, PFS did include **x x x x x x x x x x** in its O&M estimate **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** over several years. *See* Parkyn/Kapitz O&M Testimony at 7. As we noted above in section IV.F.2.b, PFS need not specify when its costs will be incurred. Thus, we find that PFS has appropriately included **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** in its O&M estimates.

i. BIA Bond

4.74 The State argues that because the BIA has the authority to require PFS to post a surety bond, PFS must include the cost of posting such a bond. *See* State Findings at 45. Mr. Parkyn testified that although the BIA had not determined whether they would require PFS to post a bond, most of the major issues for which the BIA would normally require bonding were considered by the BIA to be sufficiently covered by commitments PFS made its application. *See* Tr. at 2138-39. Furthermore, the lease agreement signed between the Skull Valley Band, the BIA, and PFS waives any obligation on the part of PFS to post a surety bond, unless PFS fails to make its lease payments as prescribed by the agreement. *See* PFS Exh. J, at 14 (Amended and Restated Business Lease Between Skull Valley Band of Goshute Indians and Private Fuel Storage, L.L.C. (May 20, 1997)); Tr. at 2148. Thus, we find the PFS exclusion of the cost of a BIA surety bond from its O&M cost estimates to be reasonable.

j. Skull Valley Band Bond and Insurance

4.75 The State asserts that PFS must include the costs of additional insurance or bonding that the Skull Valley Band may require. *See* State Findings at 45. Mr. Parkyn testified that the Skull Valley Band had not indicated that it would ask PFS to post a bond. *See* Tr. at 2140. According to the signed business lease, the Skull Valley Band also waives any PFS obligation to post a bond to guarantee payment under the lease, unless PFS fails to make such payments. *See* PFS Exh. J, at 14. The Board finds, therefore, that PFS need not include the cost of such a bond in its O&M cost estimates.

4.76 With regard to additional insurance that may be required, the lease agreement obligates PFS to obtain various types of insurance coverage, including, but not limited to, nuclear liability insurance, workers' compensation, contractor's insurance, fire and damage insurance, automobile insurance, contractual liability insurance, general errors and omissions insurance, directors' and officers' insurance, and business interruption insurance. *See id.* at 13. The costs appear to be covered under the estimated costs for operating support. *See* Parkyn/Kapitz O&M Testimony at 9. The lease further requires PFS to provide copies of the nuclear liability and workers' compensation coverage to the Skull Valley Band and to name the Band as an additional insured on certain policies where possible. *See id.* at 14. Thus, contrary to the State's assertion, to the degree the agreement provides the Skull Valley Band with the option to require PFS to obtain this additional insurance, the cost of this additional insurance has been included in its O&M cost estimates.

k. Staff Review of O&M Costs

4.77 The State's sole issue with the Staff's review of the O&M cost estimates concerns the Staff's acceptance of PFS's treatment of passthrough costs. *See* State Findings at 45-46. These costs include **x x.** *See* Parkyn/Kapitz O&M Testimony at 11, 13, 14, 25. Putting aside the principle, referenced in section IV.E.3.h above, that the adequacy of Staff review is not the subject of adjudicatory consideration, as we have discussed previously, PFS has in fact provided reasonable estimates of all these items except for construction loan interest costs, a matter we have found does not require a cost estimate.

l. Additional License Condition

4.78 The State seeks the imposition of an additional license condition that would require PFS to submit to additional Staff reviews of its ability to fund the operation and maintenance of the facility subsequent to the Staff's review under LC-2. *See* State Reply at 12-13. As we observed above in section IV.E.3.g, commitments made during the hearing process, including those of the NRC Staff, need not be memorialized as license conditions to be enforceable. Staff witnesses Dr. McKeigney and Mr. Wood testified under oath that following their initial review of PFS's ability to cover its O&M and decommissioning costs prior to commencement of operations pursuant to LC-2, they would conduct additional reviews if PFS were to later expand the capacity of the facility. *See* Tr. at 2580-84.

Thus, we find the imposition of the State's requested license condition to be unnecessary.

3. Summary of O&M Cost Estimates

4.79 In conclusion, we find that in accordance with 10 C.F.R. § 72.22(e)(2), PFS has reasonably estimated the costs of operation and maintenance over the 40-year planned life of the facility, with the exception of a $24 million Tooele County, Utah host payment understatement. In accordance with the Commission's instructions in CLI-00-13, the Board finds that PFS may not commence operations before service agreements for the life of the license (i.e., 20 years) are in place with prices adequate to fund operations, maintenance, and decommissioning[21] in the amount of **x x x x x x x x x x x x x x x** (to be escalated from 1997 dollars to present-day value) plus $12 million for Tooele County host payments.

G. Findings and Conclusions Regarding Onsite Property Insurance Coverage

1. Scope of PFS Nuclear Property Insurance Coverage

4.80 Generally speaking, nuclear property insurance indemnifies the policy-holder for certain losses incurred from accidental damage at the insured premises. *See* Pickerl Testimony at 3. Except where excluded in the policy, all types of property are covered for all causes of loss. *See id.* Relative to nuclear property insurance, a key coverage provision is for accidental radioactive contamination and debris removal, subject to policy terms and conditions. *See id.*

a. Property Covered by PFS's Insurance Policy

4.81 Nuclear property insurance for the PFS facility in particular would cover property at the site, in addition to certain offsite property. *See* Tr. at 1773. PFS witness Mr. Pickerl testified that at the site, the policy would cover all buildings, storage casks, tools, equipment, machinery, and Skull Valley Band land to the extent that decontamination and cleanup were required for land damaged by radioactive contamination or accident debris. *See id.* at 1773-75. Coverage would also extend to the Low rail line or the ITF, depending on which transportation

[21] Although we issue a separate decision today regarding the adequacy of the PFS efforts regarding decommissioning cost estimates, *see* Partial Initial Decision of May 27, 2003, LBP-05-22, 62 NRC 328, 360-68 (2005), per the table in section IV.F.1 above, we incorporate the PFS decommissioning cost estimates in this figure to provide a unified figure as an aid to assessing future compliance with LC-2.

alternative PFS chooses. *See id.* at 1775. In addition, PFS ''property in transit'' — spent fuel canisters and casks in transit and railroad cars and equipment — would similarly be covered by the policy. *See id.* at 1773-75. Vehicles licensed for highway use, however, such as the onsite ambulance and fire truck and heavy haul trucks from the ITF, would be covered under separate insurance, rather than under nuclear property insurance. *See id.* at 1773-74.

b. Causes of Loss Covered by PFS Policy

4.82 The PFS policy would cover damage resulting from earthquakes and floods. *See id.* at 1776. In the event of subsidence or settling of the land, while the policy would not cover the costs to restore the land to its preloss state, *see* Tr. at 1826, it would cover nonradiological damage to property (e.g., damaged cask) as well as the costs to clean up and remove radiological contamination caused by subsidence or settling. *See* Tr. at 1815-16, 1824-26. In addition, damage to property arising from routine military training exercises taking place at the Utah Testing and Training Range and the Dugway Proving Ground would be covered. *See* PFS Exh. L, at 2 (June 26, 2000 Letter from David Ripsom, Vice President and General Counsel, Nuclear Electric Insurance Limited, to John Parkyn, Chairman, PFS). On the other hand, damage resulting from hostile or warlike activities or activities conducted to combat or defend against an impending or expected attack would fall under the policy's War Risk Exclusion and would, therefore, not be covered. *See id.*

2. Maximum Amount and Cost of Coverage Available to PFS

4.83 PFS has identified several potential providers of insurance for the proposed facility, including Nuclear Electric Insurance Limited (NEIL), the principal market for the provision of nuclear property insurance coverage, and several other nuclear insurers in London that would participate on a smaller scale. *See* Pickerl Testimony at 3. NEIL has indicated that it would be willing to provide a maximum onsite property coverage of **x x x x x x x x x x x x,** based on a review of the information concerning the design and operation of the proposed facility, including the PFS license application, SAR and environmental report, and the Staff's December 1999 partial SER. *See id.* at 4; PFS Exh. F, at unnumbered p. 2 (May 11, 2000 Letter from Lawrence Frantz, Senior Underwriter, NEIL, to John Parkyn, Chairman, PFS). The London companies would be willing to provide an additional **x x x x x x x x x x x** of coverage. *See* Pickerl Testimony at 4. Mr. Pickerl testified that in his opinion, **x x x x x x x x x x x x** represented the maximum amount of coverage available for the PFS facility at reasonable terms and conditions. *See id.* at 6. The State did not proffer any evidence disputing this

amount. Thus, the Board finds that **x x x x x x x x x x x x** is the maximum amount of onsite nuclear property insurance coverage available to PFS at reasonable terms and conditions.

4.84 NEIL has indicated that it would charge a premium of **x x x x x x x x** per year for **x x x x x x x x x x x x x** of coverage. *See* PFS Exh. F, at unnumbered p. 2. The additional **x x x x x x x x x x x** in coverage offered by the London companies would be available to PFS at a **x x x x x x x** annual premium. *See* Pickerl Testimony at 4. Thus, as of June 2000 the combined **x x x x x x x x x x x x x** in coverage was available for a premium of **x x x x x x x x** per year.

3. Adequacy of Coverage and PFS Commitments to Obtain Coverage

4.85 Based on the lower potential for damage associated with passive storage of SNF in sealed canisters as compared to the risks associated with an operating reactor, NEIL determined that **x x x x x x x x x x x x x** of coverage would be more than adequate for the PFS facility. *See* PFS Exh. F, at unnumbered p. 2. The State does not challenge this conclusion.

4.86 PFS, however, asserts that as little as $70 million in coverage would be more than sufficient to cover damage to the site in the event of a radiological accident at the facility. *See* Parkyn Insurance Testimony at 4. The $70 million figure is apparently derived from an initial estimate given to Mr. Parkyn by Nuclear Liability Insurance, one of the insurance companies affiliated with NEIL, *see* State Exh. 14, at 132-33 (Deposition of John D. Parkyn, May 3, 2000). Moreover, as further support for this figure, Mr. Parkyn noted that given the greatly reduced risk presented by a shutdown reactor, the NRC has reduced its nuclear property insurance requirements for individual reactors undergoing decommissioning to amounts ranging from zero to $63 million. *See id.* at 6-7 (citing Changes to the Financial Protection Requirements for Permanently Shutdown Nuclear Power Reactors, 10 CFR 50.54(w) and 10 CFR 140.11, SECY-96-256 (Dec. 7, 1996)).

4.87 Although the State asserts that PFS has not justified that $70 million in coverage is adequate to cover potential property damage, *see* Sheehan Testimony at 54, it has not proffered any evidence suggesting that $70 million in coverage would be inadequate. Nonetheless, the State insists that PFS must retain the maximum amount of onsite insurance it can obtain from insurers — currently, **x x x x x x x x x x x x** of coverage. *See* State Reply at 20.

4.88 Under NRC regulations, operating reactors are not required to retain the maximum amount of insurance coverage available without regard to the accompanying terms and conditions. Pursuant to 10 C.F.R. § 50.54(w), reactor licensees are required to ''take reasonable steps to obtain insurance available at reasonable costs and on reasonable terms from private sources'' and must maintain ''a minimum coverage limit for each reactor station site of either $1.06 billion or whatever amount of insurance is generally available from private sources,

whichever is less.'' Thus, the regulations neither mandate a specific amount of coverage nor demand the maximum amount of coverage available under any circumstance, but rather provide licensees with some degree of flexibility in demonstrating compliance with the NRC's insurance requirements. Moreover, as we observed previously, current NRC regulations do not require licensees of ISFSIs to obtain onsite property insurance.

4.89 As the Commission's directive in CLI-00-13 makes clear, however, PFS must obtain such insurance in an amount to be determined based on the Board's hearing. In this regard, PFS has committed to procuring the maximum amount of coverage that is currently available at reasonable terms and costs for the facility — **x x x x x x x x x x x x x** for a total annual premium of **x x x x x x x** — and the maximum amount of coverage it can obtain for **x x x x x x x x** (in 2000 dollars). *See* Parkyn Insurance Testimony at 4-5. In the future, however, if the amount of coverage that can be purchased with an annual premium of **x x x x x x x x** falls below $70 million (in 2000 dollars), PFS will either (1) maintain $70 million in coverage, or (2) conduct an accident consequences assessment and determine the onsite recovery cost that PFS would incur from the maximum credible radiological accident at the site. *See id.* at 5. If PFS opts to perform the consequences assessment and the costs are projected to be greater than $70 million, then PFS commits to obtaining additional nuclear property insurance to cover the increased costs. *See id.* PFS also indicates, however, that in no case will PFS obtain more nuclear power insurance coverage than (1) what is available at reasonable costs and at reasonable terms from private sources at the time PFS wants to obtain additional coverage, and (2) the amount of coverage the NRC subsequently can require of ISFSIs such as PFS. *See id.*

4. Summary of Onsite Property Insurance Coverage Findings

4.90 PFS has committed to pay an annual premium of **x x x x x x x x** to maintain at least $70 million in onsite property insurance coverage. Indeed, the amount of coverage this premium would buy likely would exceed $70 million, depending on the terms and conditions being offered by private insurers or on the results of the consequences assessment. Be that as it may, in light of the decreased potential for damage posed by ISFSIs as compared to operating nuclear power plants, the flexibility of NRC insurance requirements afforded to reactor licensees, and the NRC's relaxation of minimum insurance requirements for reactors undergoing decommissioning, we find the PFS insurance commitments to be reasonable. Accordingly, pursuant to the Commission's directive in CLI-00-13, we find that absent an agency rulemaking that requires PFS to obtain additional insurance coverage, PFS must maintain onsite property insurance coverage of at

least $70 million (in 2000 dollars), or the amount of coverage that a **x x x x x x x** (in 2000 dollars) annual premium will purchase, whichever is greater.

V. SUMMARY FINDINGS OF FACT AND CONCLUSIONS OF LAW

5.1 Although the State has challenged various components of the PFS cost estimates as being understated, unreliable, or missing, with the exception of the O&M cost of $24 million for host payments to Tooele County, which is less than 1% of the total O&M costs for the facility over its 40-year lifetime, the State has not demonstrated to what extent these purported deficiencies render the PFS estimates unreliable. In short, because the State has not shown with any degree of specificity that the PFS estimates, as put forth in the evidentiary record before the Board, are understated by any significant amount, the State has not established that ''relevant uncertainties significantly greater than those that usually cloud business outlooks'' exist. *Seabrook,* CLI-99-6, 49 NRC at 222. What the State seeks is essentially a redrafting of PFS's construction and O&M plan with a new estimate without demonstrating the existence of a gross discrepancy,[22] which the Commission deemed insufficient in *Yankee Rowe.* CLI-96-7, 43 NRC at 260.

5.2 Having considered all of the evidence submitted by the parties in this proceeding, including the parties' proposed findings of fact and conclusions of law, based on the findings and conclusions set forth in section IV above, the Board finds that PFS has met its burden under 10 C.F.R. § 72.22(e) to establish reasonable assurance that it is financially qualified to construct, operate, and maintain the proposed facility in that its construction and O&M cost estimates are based on ''plausible assumptions and forecasts.'' *Seabrook,* CLI-99-6, 49 NRC at 222. Further, we find that PFS's commitments to obtain onsite property insurance coverage to be reasonable. Therefore, relative to the issues raised in subparts 5, 6, and 10 of contention Utah E/Confederated Tribes F that were the subject of the Board's June 2000 evidentiary hearing, the Board finds that PFS has provided reasonable assurance of its financial qualifications in compliance with 10 C.F.R. § 72.22(e), and thus subparts 5, 6, and 10 of contention Utah E/Confederated Tribes F are resolved in favor of PFS.[23]

---

[22] Despite our acceptance of the State's argument that the Tooele County host payments are understated by $24 million over the facility's 40-year lifetime, this component represents a mere 0.8% of the total O&M cost estimate, rendering it immaterial to the overall cost estimate.

[23] Recently, in the form of a motion for reconsideration of its decision in LBP-03-4, 57 NRC 69 (2003), regarding State concerns over the probability of military aircraft accidents in connection with the Skull Valley facility, PFS has put before the separate Licensing Board chaired by Administrative

(Continued)

6.1 Pursuant to 10 C.F.R. § 2.760, it is this 27th day of May 2003, ORDERED, that this Partial Initial Decision will constitute a final decision of the Commission forty (40) days from the date of issuance, or on *Monday, July 7, 2003,* unless a petition for review is filed in accordance with 10 C.F.R. § 2.786, or the Commission directs otherwise. Any party wishing to file a petition for review on the grounds specified in 10 C.F.R. § 2.786(b)(4) must do so within fifteen (15) days after service of this first Partial Initial Decision. The filing of a petition for review is mandatory in order for a party to have exhausted its administrative remedies before seeking judicial review. Within ten (10) days after service of a petition for review, parties to this proceeding may file an answer supporting or opposing Commission review. Any petition for review and any answer shall conform to the requirements of 10 C.F.R. § 2.786(b)(2)-(3).

6.2 Given previous party positions suggesting that financial assurance-related information may include proprietary or other sensitive data, on or before *Friday, June 20, 2003,* the State, PFS, and the Staff shall provide the Board with a joint filing outlining each (1) proposed redaction of any part of this Partial Initial Decision to which there is no objection, (2) proposed redaction of any part of this Partial Initial Decision to which there is an objection, and (3) proposed redaction of any part of the cross-examination plans submitted by the parties to the Board in connection with the evidentiary presentations on contention Utah E/Confederated Tribes F.[24] The particular word or phrase to be withheld from public release shall be specified for each proposed redaction; blanket requests for withholding are disfavored. Further, in accordance with 10 C.F.R. § 2.790, the party seeking the proposed redaction shall at the same time provide a separate submission that describes with specificity (as supported by any necessary affidavits) the reasons for withholding each proposed redaction from the public. Responses by any party

---

Judge Farrar the possibility of authorizing initial construction and operation of a significantly smaller, 336-cask facility. Currently, the license application before this Board outlines plans for a very differently sized facility, and it is upon the basis of that application that we make our ruling today.

[24] In addition, as was noted in above, *see* supra note 6, pending before the Board are party pleadings regarding the disclosure of portions of the hearing transcripts, prefiled testimony, and exhibits from the June 2000 evidentiary hearing and a motion to adopt joint transcript corrections. It would be the Board's intention to rule upon those at the same time it makes a determination about public disclosure of all or parts of this Decision, as well as of the summary disposition and contention Utah S decisions issued today.

objecting to a proposed redaction shall be filed on or before *Monday, June 30, 2003.*

THE ATOMIC SAFETY AND
LICENSING BOARD[25]

G. Paul Bollwerk, III, Chairman
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland
May 27, 2003

[25] Pursuant to previous Board issuances on e-mail service of documents identified as potentially containing proprietary information, copies of this Partial Initial Decision were sent this date by Internet e-mail transmission to counsel for PFS, the State, and the Staff. In addition, this date a memorandum was sent by e-mail to all the parties to this proceeding advising them of the issuance of this Decision and the Board's determination to afford this Decision confidential treatment pending a response by PFS, the State, and the Staff to the Board's inquiry under paragraph 6.2 above. *See* Licensing Board Memorandum and Order (Notice Regarding Issuances Concerning Contentions Utah E/Confederated Tribes F and Contention Utah S) (May 27, 2003) (unpublished).

Although agreeing with the result reached here, because of illness Judge Kline was unavailable to participate in the final preparation of this Decision.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Dr. Jerry R. Kline
Dr. Peter S. Lam

In the Matter of **Docket No. 72-22-ISFSI**
(ASLBP No. 97-732-02-ISFSI)

PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage Installation) **May 27, 2003**

In this 10 C.F.R. Part 72 application by Private Fuel Storage, L.L.C. (PFS), for a license to construct and operate an independent spent fuel storage installation (ISFSI) on the Skull Valley, Utah reservation of the Skull Valley Band of Goshute Indians, the Licensing Board finds relative to the challenges posed by Intervenor State of Utah in connection with its contention Utah S, Decommissioning, that PFS has met its burden of proof to show that its decommissioning plan meets the requirements of 10 C.F.R. §§ 72.30(a) and (c) by providing reasonable assurance that there is sufficient funding for site decommissioning and that the plan protects the health and safety of the public, and therefore concludes that this challenge to the PFS license application cannot be sustained.

RULES OF PRACTICE: EVIDENCE (FEDERAL RULES); WITNESSES (BURDEN AND SHOWING FOR DEMONSTRATING QUALIFICATIONS)

In the event of a challenge to a witness's qualifications, the party offering that witness bears the burden of showing that the witness possesses sufficient

expertise. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-410, 5 NRC 1398, 1405 (1977). There is no bright-line rule under the agency's rules of practice for evaluating a witness's expert qualifications. *See Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982). Rather, the Federal Rules of Evidence, and specifically Rule 702, provide a standard to gauge a witness's expert status, *id.,* even though the Federal Rules of Evidence are not binding and serve only as guidance for presiding officers, *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), LBP-01-9, 53 NRC 239, 250 (2001). Presiding officers have, in the past, accorded less weight to the testimony of a witness acknowledging no expertise in a specific area. *See Public Service Electric and Gas Co.* (Hope Creek Generating Station, Units 1 and 2), LBP-78-15, 7 NRC 642, 647 n.8 (1978). NRC case law does allow a witness to be qualified through academic training or relevant experience, or a combination of both. *See Shearon Harris,* LBP-01-9, 53 NRC at 250.

DECOMMISSIONING: INDEPENDENT SPENT FUEL STORAGE INSTALLATION (TIMING OF COST ESTIMATE REVIEWS)

RULES OF PRACTICE: CHALLENGE TO AGENCY REGULATIONS

NRC regulations and guidance explicitly require ISFSI applicants to perform periodic rather than annual reviews of their cost estimates. *See* 10 C.F.R. § 72.30(b) (a preliminary decommissioning plan (PDP) must include ''means of adjusting cost estimates and associated funding levels periodically over the life of the ISFSI''); *see also* NUREG-1567, at 16-7 (applicant should provide a ''means for updating the cost estimate, on a periodic basis''). Therefore, a request for a license condition that requires the applicant to review and adjust its cost estimates on an annual basis is improperly seeking a stricter requirement than that mandated by Commission regulations. *See* 10 C.F.R. § 2.758(a) (party challenge to an NRC regulation in an adjudicatory proceeding not permitted); *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 206 (2000) (denying intervenor request for a requirement ''more stringent'' than NRC regulations).

RULES OF PRACTICE: DEFAULT (DISMISSAL OF CONTENTION)

A presiding officer has the discretion to dismiss a contention for default where a sponsoring party does not pursue it at hearing, in other words an ''abandoned contention.'' *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-00-5, 51 NRC 64, 67-68 (2000).

DECOMMISSIONING: INDEPENDENT SPENT FUEL STORAGE INSTALLATION (INSURANCE REQUIREMENTS)

Part 72 ISFSI licensees, like Part 50 nuclear reactor licensees, *see* 10 C.F.R. § 50.54(w), face no requirement for including potential accident recovery costs within decommissioning cost estimates, and no NRC regulations that require as much have been identified. However, when nuclear property damage insurance is obtained by an applicant to cover the proposed facility, potential accident cost recovery is accounted for by that insurance, and so need not be counted separately as a decommissioning cost. *See* 50 Fed. Reg. 5600, 5606 (Feb. 11, 1985) (proposed rule indicating that ''[a]ssurance of funds for post-accident cleanup is more properly covered by use of insurance'' rather than under a decommissioning rule).

LICENSE CONDITIONS: STANDARDS FOR IMPOSING

When a Board has substantively rejected the merits of arguments underlying license conditions requested by an intervenor, there is no need to address the sufficiency of those proposed conditions. *See Power Authority of the State of New York* (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-01-14, 53 NRC 488, 558-59 (2001) (declining to address intervenor's proposed license conditions when the merits of decommissioning funding assurance argument were rejected).

TECHNICAL ISSUE(S) DISCUSSED

The following technical issues are discussed: decommissioning (financial qualifications, insurance requirements).

TABLE OF CONTENTS

I. INTRODUCTION 332

II. PROCEDURAL BACKGROUND 332

III. PARTIES' POSITIONS ON CONTENTION UTAH S 341
- A. Witness Qualifications 341
  - 1. PFS Witness Parkyn 342
  - 2. Staff Witnesses McKeigney and Wood 343
  - 3. State Witness Sheehan 344
- B. Financial Assurance Regarding Decommissioning Cost/Funding Matters 346

1. Cost/Funding Adjustments 348
a. Annual Review of Decommissioning Costs and Site Survey 348
b. Adjustment in the Letter of Credit 349
2. Storage Cask Decommissioning 349
3. Vintage of Cost Estimates 351
4. Decommissioning Cost Estimate Conservatism 351
C. Large-Scale Accidents and NRC Insurance Requirements 352
D. License Conditions 353

IV. FACTUAL FINDINGS AND LEGAL CONCLUSIONS 356
A. Findings Regarding the PFS Application and Proposed Facility 356
B. Findings and Conclusions Regarding the Parties' Witnesses Findings 357
C. Findings and Conclusions Regarding Decommissioning Cost/Funding Matters 360
1. Decommissioning Costs and Funding 360
a. Annual Review of Decommissioning Costs and Site Survey 363
b. Adjustment in the Letter of Credit 364
2. Findings and Conclusions Regarding Storage Cask Decommissioning 366
3. Findings and Conclusions Regarding Vintage of Cost Estimates 367
4. Findings and Conclusions Regarding Cost Estimate Conservatism 368
D. Findings and Conclusions Regarding Large Accidents and NRC Insurance Requirements 368
E. Findings and Conclusions Regarding License Conditions 370

V. SUMMARY FINDINGS OF FACT AND CONCLUSIONS OF LAW 370

PARTIAL INITIAL DECISION
(Contention Utah S, Decommissioning)

[*Note:* Although this Partial Initial Decision was originally issued in May 2003, it was treated as a nonpublic issuance pending review of challenges by Intervenor State of Utah to claims by applicant Private Fuel Storage, L.L.C., that pursuant to 10 C.F.R. § 2.790 certain portions of the Decision should be withheld from public

disclosure as proprietary information. With issuance of the Commission's final decision on that matter, *see* CLI-05-16, 62 NRC 56 (2005), this Decision is being publicly released in a redacted form.]

I. INTRODUCTION

1.1 Private Fuel Storage, L.L.C. (PFS), applied for a 10 C.F.R. Part 72 license in June 1997 to build and operate an independent spent fuel storage installation (ISFSI) located on the reservation of the Skull Valley Band of Goshute Indians in Skull Valley, Utah, roughly 50 miles southwest of Salt Lake City. The Applicant is organized as a limited liability corporation consisting of eight constituent electric utilities that possess one or more operating or shutdown nuclear power plants. Pursuant to the 20-year license application, PFS intends to hold up to 40,000 metric tons uranium (MTU) at the 1/4-mile square Skull Valley site in an aboveground dry cask storage arrangement. This Partial Initial Decision concerns admitted contention Utah S, Decommissioning, by which Intervenor State of Utah contests the PFS method of decommissioning funding for the Skull Valley site.

1.2 For the reasons set forth below, the Board has determined that, notwithstanding the contention Utah S challenge, PFS has met its burden of proof to show that its decommissioning plan meets the requirements of 10 C.F.R. § 72.30(a) and (c) by providing reasonable assurance that there is sufficient funding for site decommissioning and that the plan protects the health and safety of the public.[1] Thus, the Board finds in favor of PFS relative to contention Utah S.

II. PROCEDURAL BACKGROUND

2.1 A notice of opportunity for a hearing was published by the NRC in the *Federal Register* following the June 1997 submission of the PFS license application (LA). 62 Fed. Reg. 41,099 (July 31, 1997). The State was among several petitioners seeking admission to that adjudicatory proceeding in accordance with 10 C.F.R. § 2.714(a). *See* [State] Request for Hearing and Petition for Leave To Intervene (Sept. 11, 1997) at 1. Through an initial prehearing order dated September 23, 1997, the Board set October 24, 1997, as a deadline for the Petitioners

[1] The decommissioning plan is to be distinguished from the decommissioning funding plan (DFP); the former is submitted at the time of actual decommissioning whereas the latter is submitted by NRC licensees or applicants to show financial assurance for decommissioning. Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Standard Format and Content of Financial Assurance Mechanisms Required for Decommissioning Under 10 CFR Parts 30, 40, 70, and 72, Regulatory Guide 3.66, at 1-3, 1-4, 1-6 (June 1990) [hereinafter Regulatory Guide 3.66]. The DFP is part of the decommissioning plan.

to supplement their petitions relative to their standing and to submit contentions and supporting bases. *See* Licensing Board Memorandum and Order (Initial Prehearing Order) (Sept. 23, 1997) at 2-3 (unpublished). This was followed by various orders that granted a 30-day extension of the filing period, as well as a scheduled site visit and prehearing conference during the week of January 26, 1998. *See* Licensing Board Memorandum and Order (Schedule for Prehearing Conference/Site Visit and Responses to Supplemental Petition) (Oct. 24, 1997) at 1 (unpublished); Licensing Board Memorandum and Order (Ruling on Motions To Suspend Proceeding and for Extension of Time To File Contentions) (Oct. 17, 1997) at 11 (unpublished). On November 23, 1997, the State filed a supplemental petition containing contention Utah S, followed by corresponding PFS and NRC Staff responses. *See* [State] Contentions on the Construction and Operating [License] Application by [PFS] for an [ISFSI] (Nov. 23, 1997) at 123-30 [hereinafter State Contentions]; [PFS] Answer to Petitioners' Contentions (Dec. 24, 1997) at 236-56; NRC Staff's Response to Contentions Filed by [State] (Dec. 24, 1997) at 49-52; *see also* [State] Reply to the NRC Staff's and [PFS's] Response to [State] Contentions A through DD (Jan. 16, 1998) at 69-74. As originally proffered by the State, contention Utah S and its accompanying bases read as follows:

> UTAH S — Decommissioning
>
> CONTENTION: The decommissioning plan does not contain sufficient information to provide reasonable assurance that the decontamination or decommissioning of the ISFSI at the end of its useful life will provide adequate protection to the health and safety of the public as required by 10 CFR § 72.30(a), nor does the decommissioning funding plan contain sufficient information to provide reasonable assurance that the necessary funds will be available to decommission the facility, as required by 10 CFR § 70.3(b).
>
> BASIS: The Applicant's decommission plan and funding of the plan are deficient in the following respects:
>
> 1. The Applicant has failed to provide reasonable assurance, as required by 10 CFR § 72.30(b), that funds will be available to decommission the ISFSI. The Applicant intends to obtain a letter of credit ''in [the] amount of $1,631,000 to cover the estimated facility and site decommissioning costs, exclusive of the storage casks.'' LA at 5-2. As a newly formed entity and without any documentation included in the application as to PFS's capital structure or assets, the Applicant offers no reasonable assurance that it will be qualified to obtain such a letter of credit. Contention E (Financial Qualifications), which more fully discusses the financial assurance for newly formed entities, and whose basis is incorporated by reference into this contention.
>
> 2. The financial assurance regulations for decommissioning allow for use of an external sinking fund coupled with a surety method or insurance. 10 CFR § 72.30(c). The application specifies a surety will be in the form of a letter of credit, but does

not provide the wording for the letter of credit or state that the letter of credit is irrevocable. LA at 10-2, LA App. B, at 5-2, [Safety Analysis Report (SAR)] at 9-6. This is contrary to Regulatory Guide 3.66, *Standard Format and Content of Financial Assurance Mechanisms required for decommissioning under 10 CFR Parts 30, 40, 70 and 72* (hereafter ''Reg. Guide 3.66''), p. 1-4, which states that the Decommissioning Funding Plan ''should include the text of the financial assurance instrument(s) that a licensee has chosen to comply with the financial assurance requirements.''

3. The application states that decommissioning will be preceded by off site shipment of the canisters containing the spent fuel. LA App. B, at 1-1, 2-3; SAR at 9.6-1. However, the Applicant's own words belie this possibility. In its discussion of ''Need for the Facility'' (ER 1.2), the Applicant portrays existing reactor sites as running out of spent fuel storage options. The Applicant also states that its facility ''would allow reactors that are permanently shutdown to remove all the spent fuel from the site, thus permitting the complete decommissioning of the site.'' ER at 1.2-2. Therefore, the shipment of the spent fuel back to the originating nuclear power plants will not be viable at the time of decommissioning of the ISFSI.

It is not unrealistic to expect that once the spent fuel casks are stored at the PFS ISFSI, they will remain there beyond the expected license term because there are no off site shipment options. Fuel shipments to Morris, Illinois and West Valley, New York, offer two excellent examples of the plausibility of [this] occurrence.

The facility at Morris, Illinois, built by General Electric for reprocessing of spent fuel but never operated as such, included a wet storage pool in which spent fuel was staged for reprocessing. Although no spent fuel was reprocessed in that facility, the spent fuel has remained in storage for decades in the absence of disposal or alternative storage. Similar circumstances developed at the West Valley facility, which was originally built and operated by Nuclear Fuel Services. At that location, spent fuel was reprocessed and high-level waste was generated, and in the absence of disposal or alternative storage capacity, the high-level waste has also remained at that site for decades.

Furthermore, the federal government has not provided a disposal facility to which the spent fuel could be sent. Therefore, the major prerequisite for decommissioning (*i.e.,* a facility to which the spent fuel could be shipped so that decommissioning could begin) is simply assumed to be available. This points out another defect in the application: The Applicant has failed to identify contingent costs in the realistic event that the ISFSI cannot be decommissioned at the end of the license term.

4. The Applicant has failed to justify the basis for all decommissioning cost estimates. The application estimates the cost to decommission a storage cask is $17,000 and estimates the decommissioning cost for the remainder of the ISFSI at $1,631,000. LA pp. 1.7, 3.2. There can be no meaningful review of these amount[s] unless they are broken down with some specificity. Furthermore, the decommissioning cost estimates do not state the year's dollars used (*e.g.,* 1997

dollars) as provided in NUREG-1567, *Draft Standard Review Plan for Spent Fuel Dry Storage Facilities.* LA Appendix B, Chapter 4.

In addition, some of the estimates provided do not appear consistent. For example, the Applicant specifies that $5 per square foot is adequate to decontaminate the Canister Transfer Building, whereas the Applicant estimated cost to decontaminate the cask surface is $1 per square foot. LA, App. B, pp. 4-2 & 3. The reader is unable to determine whether the Applicant erred in estimating the decommissioning costs or whether there is a reason for the discrepancy in costs.

The application lacks the detailed and justified cost estimates [ ] necessary to evaluate the adequacy of the Applicant's decommissioning costs. The Applicant tries to excuse this omission by stating that decontamination efforts are not currently capable of being quantified, LA, App. B, at 2-1. This excuse is invalid. An applicant for a part 72 ISFSI license must submit a Decommissioning Funding Plan ''at the time of the license application.'' Regulatory Guide 3.66, *Standard Format and Content of Financial Assurance Mechanisms required for decommissioning under 10 CFR Parts 30, 40, 70 and 72* (hereafter ''Reg. Guide 3.66''), at 1-3, 1-6. Moreover, the Decommissioning Plan must include ''comprehensive consideration of both direct and all indirect decommissioning costs. The plan must compare the cost estimate with present funds, and if there is a deficit in present funding the plan must indicate the means for providing sufficient funds for completion of decommissioning.'' NUREG 1567, at 16-4. This information is missing from the application.

Furthermore, to ensure that sufficient decommissioning funds are available, the Applicant should take a conservative approach in estimating the following: maximum quantities of spent fuel, other radioactive waste, and solid and hazardous waste generated during the license term; size of decontamination surface areas; disposal needs for spent fuel, low level radioactive waste, solid waste, hazardous waste and other regulated materials; and demolition and removal of the structures and restoration of the site to its original state.

5. The decommissioning cost estimate totally ignores the potential for large accidents and associated release or contamination at the ISFSI. LA Appendix B, Chapter 4. The very large number of casks that are to be handled at the ISFSI and the large number of operations and movements that will be required argue strongly for anticipating this potential and making arrangements for a multimillion dollar increase in decommissioning to ''provide reasonable assurance that the planned decommissioning of the ISFSI will be carried out'' as required by 10 CFR § 72.30.

6. The Applicant has failed to reasonably anticipate the extent of severity of contamination by optimistically presuming there will be no residual contamination on the casks or pads. For example, the Applicant indicates that the storage pads will not be contaminated and only includes funding to decontaminate 10% of the total surface area. LA, Appendix B. The basis for funding cleanup of only 10% of the storage pads is not justified. *See also* Contention J (Inspection and Monitoring of Safety components), Basis 2(b) (Detection and control of contamination). Therefore,

the Preliminary Decommissioning Plan should provide procedures and cost estimates that reflect realistic consideration of the potential need for decommissioning of a facility that has experienced contamination from canister releases. LA App. B, at 2-1, 6-1.

7. The Applicant has failed to identify the types of waste it anticipates will be generated at the facility. Moreover, the Applicant has failed to propose decontamination and disposal practices except to state that ''to the extent practicable . . . conventional methods [will be used].'' LA App. B, at 2-3. For instance, the Applicant assumes that the welded closure of canisters of spent fuel makes impossible or precludes leakage of canisters. As recently evidenced by the Sierra Nuclear VSC-24 cask design deficiencies, welding does not always result in a leak tight closure and demonstrated leak tight welded closures can subsequently fail. *See e.g.,* NRC *Demand for Information,* EA 97-441 (October 6, 1997) ACN # 9710100120.

8. The application inadequately addresses decontamination of storage casks. The Applicant makes the following statement: ''Storage casks with contamination or activation levels above the applicable NRC limits for unrestricted release will be *dismantled,* with the activated or contaminated portions segregated and disposed of as low level waste'' (emphasis added). LA, App. B, at 2-3. Nowhere does the Applicant discuss the process by which dismantling will occur, where dismantling will occur, and whether the Applicant will have trained personnel, suitable equipment and appropriate safety procedures to undertake this operation. This information is necessary to provide effective detail on decommissioning plans and costs.

9. The Applicant has failed to adequately estimate the cost of decontaminating each storage cask liner. The estimated cost of decontamination of a typical storage cask liner is dependent upon the percentage of the liner assumed to exhibit contamination or activation. The analysis presented includes an unsupported assumption that only 20% of the typical liner will be contaminated. A larger percentage would increase the estimated decontamination cost beyond that provided for in cask decontamination prepayments to the decommissioning funding plan. Adequate funding for storage cask decommissioning cannot be assured because it would then depend on successful assessment of participating customers to pay for the additional costs. LA App. B, at 4-2. This cost may also be increased as a result of Applicant's failure to provide a means for decontaminating all parts of the canisters. *See* Contention J, Inspection and Maintenance of Safety Components, Basis 2 (Hot cell needed to protect against undue risk).

10. The Applicant specifies that decommissioning costs include $250,000 for a survey of the ISFSI site. LA, App. B, pp. 4-2, 3. However, the Applicant does not describe the type of survey or the sampling protocol. Without such information, it is impossible to determine the adequacy of the plan or the decommissioning cost estimates. The Applicant's generic description of an intent to meet NRC limits for unrestricted release fails to meet the ''sufficient information on proposed practices

and procedures for the decommissioning of the site and facility'' required by 10 CFR § 72.30(a). *Id.* at 2.3.

11. The Applicant has failed to provide decommissioning procedures and costs at an intermodal transfer facility (Rowley Junction). In fact the application has failed to provide any significant details concerning the planned structures and operations at the transfer facility.

State Contentions at 123-30 (footnote omitted).

2.2 In an April 22, 1998 decision, the Board accepted intervention requests from the State; Ohngo Gaudadeh Devia; Confederated Tribes of the Goshute Reservation; Skull Valley Band of Goshute Indians; and Castle Rock Land and Livestock, L.C., Skull Valley Co., Ltd., and Ensign Ranches of Utah, L.C., (hereinafter referred to collectively as Castle Rock). *See* LBP-98-7, 47 NRC 142, 157, *reconsideration granted in part and denied in part,* LBP-98-10, 47 NRC 288, *aff'd on other grounds,* CLI-98-13, 48 NRC 26 (1998). Contention Utah S was one of twenty-six issues the Board admitted as contentions in its April 22, 1998 decision. *See id.* at 251-58. In admitting contention Utah S, the Board limited it to those bases sufficient to establish a genuine material dispute worthy of additional inquiry, i.e., Basis 1, Basis 2, Basis 4, Basis 5, Basis 10, and Basis 11. *See id.* at 196-97. In addition, the decommissioning cost estimates for nonradiological solid and hazardous waste disposal under Basis 4 of Utah S were found to be at issue insofar as they concerned license termination. *See id.* Finally, contention Utah S was deemed inadmissible as to the matters set forth in Basis 3, Basis 6, Basis 7, Basis 8, and Basis 9. *See id.* Finally, consolidating it with contention Castle Rock 7, the Board revised Utah S to read as follows:

UTAH S/CASTLE ROCK 7 — Decommissioning

CONTENTION: The decommissioning plan does not contain sufficient information to provide reasonable assurance that the decontamination or decommissioning of the ISFSI at the end of its useful life will provide adequate protection to the health and safety of the public as required by 10 C.F.R. § 72.30(a), nor does the decommissioning funding plan contain sufficient information to provide reasonable assurance that the necessary funds will be available to decommission the facility, as required by 10 C.F.R. § 72.22(e).

Id. at 255.[2]

2.3 Thereafter, the Board granted a PFS motion for summary disposition on contention Utah B, License Needed for Intermodal Transfer Facility, essentially

[2] Because of its similarity to contention Utah S, the Board admitted and consolidated portions of contention Castle Rock 7 with contention Utah S. In pertinent part, Castle Rock 7 provided:

(Continued)

holding that 10 C.F.R. Part 72 does not apply to the Rowley Junction Intermodal Transfer Point (ITP). *See* LBP-99-34, 50 NRC 168, 176 (1999). In that same ruling, the Board requested that the parties convey their views of the impact of the resolution of contention Utah B upon the other contentions, including Utah S. *See id.* at 178. The Board subsequently dismissed the portion of Utah S relating to the Rowley Junction ITP, namely the existence of decommissioning procedures and costs at the Rowley Junction ITP (Basis 11). LBP-99-39, 50 NRC 232, 236 (1999).

2.4 In a February 2, 2000 order, the Board scheduled hearings on Utah S, in addition to other contentions, from June 19 to June 30, 2000, in Salt Lake City, Utah, and set July 31, 2000, as the deadline for the parties to submit their proposed findings of fact and conclusions of law. *See* Licensing Board Order (General Schedule Revision and Other Matters) (Feb. 2, 2000) Attach. A (unpublished). The Board granted the parties' April 7, 2000 joint motion to exclude the license application's decommissioning cost estimates. *See* Licensing Board Memorandum and Order (Granting Joint Motion To Approve Stipulation on Contention Utah S and Outlining Administrative Matters) (May 1, 2000) at 2-3 (unpublished) [hereinafter Joint Motion Memorandum and Order]. Also, the Board amended the matters to be litigated at the evidentiary hearing as those set forth by the parties in Attachment A to their April 7 motion. *See id.;* Joint Motion by the State of Utah and the Applicant to Approve Stipulation for the Hearing of Utah Contention S (Apr. 7, 2000), Attach. A [hereinafter Joint Motion]. Attachment A altered Basis 1, Basis 4, Basis 5, and Basis 10 to read as follows:

> Basis 1: The Applicant has failed to provide reasonable assurance, as required by 10 CFR § 72.30(b), that funds will be available to decommission the ISFSI in that

---

> CASTLE ROCK 7 — Inadequate Financial Qualifications
>
> CONTENTION: The Application does not provide assurance that PFS will have the necessary funds to cover estimated construction costs, operating costs, and decommissioning costs, as required by 10 C.F.R. § 72.22(e) in that:
>
> * * * *
>
> c. the Application does not provide assurance that PFS will have sufficient resources to cover nonroutine expenses, including without limitation the costs of a worst case accident in transportation, storage, or disposal of the spent fuel;
>
> * * * *
>
> f. The Application fails to itemize cost estimates and otherwise provide enough detail to permit evaluation of the tenability of such estimates.

LBP-98-7, 47 NRC at 214-15. Although Castle Rock received party status, on December 21, 1998, these intervenors submitted a notice of voluntary withdrawal from the proceeding due to a settlement that it reached with PFS. *See* LBP-99-6, 49 NRC 114, 116 (1999). The State sought to preserve paragraph c as part of the contention, a request the Board granted. *See id.* at 121.

the letter of credit PFS intends to obtain ''in the amount of $1,631,000 to cover the estimated facility and site decommissioning costs, exclusive of the storage casks,'' LA, App. B, p. 5-2, does not include funds for the decommissioning of the storage casks.[ ]

Basis 4: The Applicant has failed to justify the basis for its decommissioning cost estimates of $17,000 to decommission a storage cask and of $1,631,000 to decommission the remainder of the ISFSI in that (i) the decommissioning cost estimates do not state the year's dollars used (e.g., 1997) dollars as provided in NUREG-1567, *Draft Standard Review Plan for Spent Fuel Dry Storage Facilities,* LA Appendix B, Chapter 4, and (ii) the estimates are not properly escalated to convert past dollars values into future dollars values (i.e. the future value of costs when the costs are expected to be incurred).

An applicant for a part 72 ISFSI license must submit a Decommissioning Funding Plan ''at the time of the license application.'' Regulatory Guide 3.66, Standard Format and Content of Financial Assurance Mechanisms required for decommissioning under 10 CFR Parts 30, 40, 70 and 72 (hereafter ''Reg. Guide 3.66''), at.1-3, 1-6. The Decommissioning Plan ''must compare the cost estimate with present funds, and if there is a deficit in present funding the plan must indicate the means for providing sufficient funds for completion of decommissioning.'' NUREG 1567, at 16-4. This information is missing from the application.

Furthermore, to ensure that sufficient decommissioning funds are available, the Applicant should take a conservative approach in estimating the maximum quantity of spent fuel casks to be stored at the site during the license term.

Basis 5: The decommissioning cost estimate totally ignores the potential for large accidents and associated release or contamination of the ISFSI. LA Appendix B, Chapter 4. The very large number of casks that are to be handled at the ISFSI and the large number of operations and movements that will be required argue strongly for anticipating this potential and making arrangements for a multimillion dollar increase in decommissioning to ''provide reasonable assurance that the planned decommissioning of the ISFSI will be carried out'' as required by 10 CFR § 72.30.

Basis 10: The Applicant specifies that decommissioning costs include $260,000 for a survey of the ISFSI site. LA, App. B, p. 4-6. The Applicant has failed to justify the basis for this estimate in that [it] does not state the year's dollars used (e.g., 1997 dollars) as provided in NUREG-1567, *Draft Standard Review Plan for Spent Fuel Dry Storage Facilities,* LA Appendix B, Chapter 4, and (ii) is not properly escalated to convert past dollars values into future dollars values (i.e. the future value of costs when the costs are expected to be incurred).

Joint Motion Attach. A at 1-2; *see* Joint Motion Memorandum and Order at 2-3.[3] Under Basis 1, however, PFS reserved the right to argue that amended Basis 1

[3] A footnote to Attachment A indicated that Basis 2 no longer remained at issue due to a change in the language of a proposed letter of credit supplied by PFS. *See* Joint Motion Attach. A at 1 n.*.

is not in conformity with the State's initial Basis 1 and is beyond the scope of admitted contention Utah S. *See* Joint Motion Attach. A at 1 n.**. The Board set May 15, 2000, as the deadline for the parties to submit prefiled testimony and prefiled exhibits for their direct cases. *See* Joint Motion Memorandum and Order at 4. On June 27, 2000, the State, the Staff, and the Applicant presented their cases regarding contention Utah S.[4] *See* Tr. at 2414-2551.

2.5 All three parties timely filed their proposed findings of fact and conclusions of law on July 31, 2000. *See* NRC Staff's Proposed Findings of Fact and Conclusions of Law Concerning [Contention Utah S Decommissioning] (July 31, 2000) [hereinafter Staff Findings]; [PFS] Proposed Findings of Fact and Conclusions of Law on [Contention Utah S] (July 31, 2000) [hereinafter PFS Findings]; [State] Proposed Findings of Fact and Conclusions of Law Regarding Contention Utah S, [PFS] Capacity To Fund Decommissioning (July 31, 2000) [hereinafter State Findings]. The next day, acting on a Licensing Board referral, the Commission affirmed in part, reversed in part, and remanded for further proceedings a Board decision (LBP-00-6, 51 NRC 101 (2000)) involving PFS financial qualifications and directed that, among other things, PFS submit to the Board, the State, and the Staff copies of its model service agreement (MSA) by which it would enter into contracts to provide spent fuel storage services. *See* CLI-00-13, 52 NRC 23 (2000). As a consequence, the Board requested that on or before August 28, 2000, the parties describe the impact of CLI-00-13 upon their July 31, 2000 proposed findings of fact and conclusions of law involving the three contentions — Utah E/Confederated Tribes F, Financial Assurance; Utah R, Emergency Planning; and Utah S — that were the subject of the June 2000 evidentiary hearing. *See* Licensing Board Order (Scheduling/Administrative Matters) (Aug. 4, 2000) at 2 (unpublished). As a result, the parties filed their proposed reply findings, incorporating discussions of the impacts, if any, of CLI-00-13 upon contention Utah S and the other contentions.[5] *See* NRC Staff's Proposed Findings in Reply to the [State] Proposed Findings Concerning [Contention Utah S] (Aug. 28, 2000) [hereinafter Staff Response]; [PFS] Reply to the Proposed Findings of Fact and Conclusions of Law of the [State] and the NRC Staff on [Contention Utah S] (Aug. 28, 2000) [hereinafter PFS Response]; [State] Discussion of the Impact of CLI-00-13 on Proposed Findings of Fact and Conclusions of Law Relating to [Contention Utah S] (Aug. 28, 2000) [hereinafter Initial

[4] Although the hearing session regarding contention Utah S was open to the public, *see* Tr. at 1385, in light of the financial assurance subject matter of the contention, to ensure there are no inappropriate disclosures we are affording the contents of this Decision confidential treatment pending further review.

[5] Both PFS and the Staff included a discussion of the impact of CLI-00-13 in their proposed reply findings, while the State submitted a proposed reply finding and a discussion of the impact of CLI-00-13 separately.

State CLI-00-13 Response]; [State] Proposed Response to Findings of Fact and Conclusions of Law Relating to Contention Utah S (Aug. 28, 2000) [hereinafter State Response]. The Board separately dealt with the schedule for filing the PFS MSA, as the Commission directed in CLI-00-13. In response to a Board order, the parties filed further responses regarding the impact of CLI-00-13 on the remaining contentions, including Utah S. *See* Licensing Board Order (Granting Motion for Leave To File Reply and Permitting Additional Filings on Impact of CLI-00-13) (Sept. 1, 2000); NRC Staff's Response to the [State's] Comments Concerning the Impacts of CLI-00-13 (Sept. 11, 2000) [hereinafter Staff CLI-00-13 Response]; [PFS's] Response to [State] and NRC Staff's Filings Regarding the Impact of Commission Decision CLI-00-13 (Sept. 11, 2000) [hereinafter PFS CLI-00-13 Response]; [State] Response to [PFS] and the Staff's Discussion of the Impact of CLI-00-13 (Sept. 11, 2000) [hereinafter State CLI-00-13 Response].

III. PARTIES' POSITIONS ON CONTENTION UTAH S

3.1 The June 2000 evidentiary hearing focused on four bases from contention Utah S, namely Basis 1, Basis 4, Basis 5, and Basis 10, as modified by the parties' April 2000 joint motion. All evidence on contention Utah S was heard by the Board on June 27, 2000. Based on the evidence received at the hearing on contention Utah S, we describe the parties' positions below.[6]

A. Witness Qualifications

3.2 For the contention Utah S segment of the June 2000 evidentiary hearing, PFS presented a single witness, Mr. John D. Parkyn, Chairman of the PFS Board of Managers. The Staff offered two witnesses, Dr. Alex F. McKeigney and Mr. Robert S. Wood, both of whom were employed in the Division of Regulatory Improvement Programs in the Office of Nuclear Reactor Regulation. Finally, the State offered one witness, Dr. Michael F. Sheehan, a partner with the firm of Osterberg & Sheehan, Public Utility Economists. Both PFS and the Staff raised concerns over portions of Dr. Sheehan's testimony, in particular those parts

[6] In its proposed findings of fact and conclusions of law, the State challenged the PFS undocumented service agreements. *See* State Findings at 7. The Commission in CLI-00-13 ordered PFS to provide a sample service contract that fulfills a number of financial assurance license conditions it imposed based on previous PFS financial assurance commitments. Thereafter, the State was to be given a chance to challenge the sufficiency of the MSA and, depending on the Intervenors' objections, if any, either a summary disposition motion could be filed or a hearing could occur. *See* CLI-00-13, 52 NRC at 35. In a separate Decision today, we also rule on the subsequent PFS motion for summary disposition on contention Utah E/Confederated Tribes F. *See* Memorandum and Order of May 27, 2003, LPB-05-20, 62 NRC 187 (2005).

relating to Dr. Sheehan's discussion of the probability of large accidents and possible cleanup costs. As indicated below, we describe the parties' positions as to the qualifications of the four witnesses.

1. PFS Witness Parkyn

3.3 PFS presented Mr. John D. Parkyn as its witness relative to the sufficiency of the DFP for the PFS facility (PFSF). Mr. Parkyn is employed as both Vice-President of Genoa Fuel Tech, a subsidiary of Dairyland Power Cooperative, and Chairman of the PFS Board of Managers. *See* Testimony of John D. Parkyn on Decommissioning the PFSF — Contention Utah S (fol. Tr. at 2424) at 1 & attached resume [hereinafter Parkyn Utah S Testimony]. His testimony indicates that Mr. Parkyn's experience in nuclear power spans over 30 years. *Id.* at 1-2 & attached resume. Mr. Parkyn received a bachelor's degree from the University of Wisconsin in nuclear engineering. *See id.* at 1 & attached resume. Further, Mr. Parkyn is licensed as a Professional Engineer in Wisconsin and as a Professional Nuclear Engineer in California, and has authored many papers in the field of nuclear energy. *See id.* Mr. Parkyn is a member of the National Planning Committee for the American Nuclear Society and was Chairman of the Wisconsin Division of the American Nuclear Society. *See id.*

3.4 Mr. Parkyn's former employment includes work as a certified reactor operator with the U.S. Army's White Sands Missile Range (1967 to 1969); as Operations Engineer, Fuel Shipping Supervisor, and licensed Senior Reactor Operator with Wisconsin Electric Power Company at its Point Beach Nuclear Plant (1972 to 1974); and Operations Engineer, Shift Technical Advisor, Fuel Shipping Supervisor, Shift Supervisor, Senior Reactor Operator, Assistant Superintendent, Plant Manager, and Acting Chief Executive Officer for Nuclear Power at Dairyland Power Cooperative's La Crosse Boiling Water Reactor. *See id.* at 2. As a Senior Reactor Operator with Wisconsin Electric Power Company, Mr. Parkyn's duties included budgeting and costing of plant modifications. *See id.* While serving as Plant Manager and Acting Chief Executive Officer for Nuclear Power with Dairyland Power Cooperative from 1982 until 1994, Mr. Parkyn was involved with supervising plant operations, budgeting, and staffing, as well as leading the plant when it shut down and began decommissioning in 1987. *See id.* In 1994, Mr. Parkyn went to work with the Mescalero Fuel Storage project, and he continued working with that organization after it became PFS. *See id.* In his current capacity with PFS, Mr. Parkyn oversees the functioning of the company that will build, operate, and decommission the PFSF. *See id.* at 3.

3.5 Mr. Parkyn is also Chairman of the Board of the Bank of Stoddard, Wisconsin, and the Bank of Ferryville, Wisconsin, as well as a Director of River Bank in La Crosse, Wisconsin. *See id.* at 1-2. Although the State during cross examination brought up Mr. Parkyn's involvement as director of the bank offering

PFS a letter of credit, *see* Tr. at 2448, none of the parties in their proposed findings of fact and conclusions of law questioned the purported expertise of Mr. Parkyn or the reasons for which his testimony is offered.

2. Staff Witnesses McKeigney and Wood

3.6 Dr. Alex F. McKeigney and Mr. Robert S. Wood, both employed by the NRC, appeared on behalf of the Staff to supply testimony relative to contention Utah S. Specifically, Dr. McKeigney and Mr. Wood testified on PFS conformity with Commission regulations pertaining to decommissioning. *See* NRC Staff Testimony of Alex F. McKeigney and Robert S. Wood on Utah Contention S — Decommissioning (fol. Tr. at 2479) [hereinafter McKeigney/Wood Testimony].

3.7 Dr. McKeigney earned a bachelor's degree in sociology and economics from the University of Mississippi, a master's degree and Ph.D. in sociology from the University of North Carolina, and an master's of business administration degree from Harvard Business School. *Id.* attached resume. Prior to his tenure with the Staff, Dr. McKeigney worked with electric utilities that operate nuclear power reactors, thus providing him the opportunity to explore alternative corporate strategies and financing plans, review options for project financing, and engage in quantitative analyses and reviews. *See id.* As a Financial Analyst in the Office of Nuclear Reactor Regulation's Division of Regulatory Improvement Programs, Dr. McKeigney is involved with such issues as financial qualifications, decommissioning funding assurance, and foreign ownership and control of nuclear reactors and nuclear material facilities. *See id.* at 1-2 & attached resume. Dr. McKeigney's responsibilities include assembling safety evaluation reports (SERs) and related information about an applicant's or licensee's financial wherewithal for license activities. *See id.* at 1-2. Furthermore, Dr. McKeigney is involved on task forces focusing on financial areas, special studies, and assignments. *See id.* at 2 & attached resume. Dr. McKeigney analyzed the PFS LA and its associated SAR, focusing on decommissioning funding assurance as well as PFS responses to the Staff's requests for additional information (RAIs). *See id.* at 2. In addition, Dr. McKeigney prepared Chapter 17 of the Staff's SER, entitled ''Financial Qualifications and Decommissioning Funding Assurance'' (Dec. 15, 1999, revised and reissued on Jan. 4, 2000), and the NRC Staff's Position on Contention Utah S (Dec. 15, 1999). *See id.* at 2-3.

3.8 Mr. Wood earned a bachelor's degree in economics from Drew University, a master's degree in public administration from Ohio State University, and completed the qualifying exams and coursework for a Ph.D. in economics at Ohio State University. *See id.* attached resume. Mr. Wood serves as a Senior Level Licensee Financial Policy Advisor in the Division of Regulatory Improvement Programs of the Office of Nuclear Reactor Regulation. *See id.* at 2 & attached resume. Additionally, Mr. Wood worked in the former U.S. Atomic Energy

Commission, and held the positions of Management Intern, Systems Analyst, Program Analyst, Assistant to the Chief of the Antitrust and Indemnity Group, and Section Chief for the Policy Development and Financial Evaluation Section in the Inspection and Licensing Policy Branch. *See id.* attached resume. Mr. Wood handled such topics as nuclear property and liability insurance, financial assurance for decommissioning nuclear power facilities, financial qualifications of NRC licensees, electric utility deregulation, license transfers, and other financial and economic issues with a potential impact on the safe operations and decommissioning of NRC-licensed nuclear facilities. *See id.* at 2 & attached resume. Moreover, Mr. Wood counseled NRC senior management and offered technical guidance and oversight to NRC Staff members in his various fields of expertise, including financial assurance analysis. *See id.* Relative to the PFS application, Mr. Wood reviewed the LA, the SAR, and the PFS responses to the Staff's RAIs addressing decommissioning funding assurance. *See id.* at 3. Mr. Wood also examined Dr. McKeigney's work on Chapter 17 of the Staff's SER and the NRC's Position on Contention Utah S (Dec. 15, 1999). *See id.* None of the parties challenged the admissibility of the testimony from Staff witnesses McKeigney and Wood.

3. State Witness Sheehan

3.9 The State presented one witness on contention Utah S, Dr. Michael F. Sheehan, whose objective was to address the reasonableness of the PFS decommissioning cost estimates in four areas. *See* Prefiled Testimony of Michael F. Sheehan, Ph.D. on Behalf of the [State] Regarding Contention Utah S (fol. Tr. at 2491) at 6 [hereinafter Sheehan Utah S Testimony]; State Findings at 2. These four areas include (1) the exclusion of large accidents in PFS's decommissioning cost estimates; (2) the vintage of the data used for the cost estimates and what year's dollars were applied; (3) the insufficiency of the PFS means of accounting for cost increases in its decommissioning cost estimates; and (4) the insufficiency of PFS's change in fee charges to its customers relative to increases in costs. *See* Sheehan Testimony at 6.

3.10 In addition to receiving a bachelor of science degree, a master of arts degree, and Ph.D. in economics from the University of California at Riverside, Dr. Sheehan holds a legal degree from the University of Iowa College of Law. *See* Prefiled Testimony of Michael F. Sheehan, Ph.D. on Behalf of the State of Utah Regarding Contention Utah E (fol. Tr. at 2190) at 1 [hereinafter Sheehan Utah E Testimony]; State Exh. 9 (Resume of Michael F. Sheehan). Currently, Dr. Sheehan is a partner in Osterberg & Sheehan, a firm specializing in public utility economics, and he has experience teaching in the field of economics. *See* Sheehan Utah E Testimony at 1. Within the past 20 years, Dr. Sheehan has concentrated his work in planning and project budget and finance analysis.

See id. at 1-2. Dr. Sheehan's experience includes work on utility rate cases, municipal valuation cases and projects, local and regional regulation of solid waste operations including rate setting, determination and evaluation of prevailing wage rates on public projects, financial studies in support of municipal collective bargaining, as well as financial qualification issues in NRC proceedings. *See id.* at 2. Dr. Sheehan has also worked on issues relative to geothermal development in California, surface mining in Oregon, uranium mining in New Mexico, and high- and low-level radioactive waste issues in the West and Midwest. *See id.* In addition, Dr. Sheehan is familiar with NRC regulations pertaining to ISFSIs, Chapter 17 of both the original (Dec. 15, 1999) and reissued (Jan. 4, 2000) versions of the Staff's SER, the revised contention per the joint motion by PFS and the State, the NRC Staff's Statement of Its Position Concerning Group I-II Contentions (Dec. 15, 1999), and the procedural history of contention Utah S. *See* Sheehan Utah S Testimony at 5.

3.11 In his direct testimony regarding large accidents in decommissioning cost estimates, Dr. Sheehan referenced several studies on cleanup costs. *See* Sheehan Utah S Testimony at 8. Dr. Sheehan testified in his answer 11 that according to one of the studies, the costs for cleaning up a rural area 4.3×10^5 square meters in size involving a cask with fourteen pressurized water reactor fuel assemblies for a shipping cask would run between $13 million and $620 million (in 1985 dollars). *See id.* The same study projected that this type of large accident would require 460 days to clean up. *See id.* During PFS cross-examination, Dr. Sheehan acknowledged that he lacked expertise in cost estimating and in calculating the likelihood of accidents, radiological results, or cleanup costs. *See* Tr. at 2492, 2508. Although the State recognizes that Dr. Sheehan is not a cost estimator, it points out that Staff witnesses McKeigney and Wood lack similar expertise, and that uncertainties, such as large-scale accidents, still must be considered in PFS decommissioning planning. *See* State Response at 6-7. Nevertheless, the State argues that Dr. Sheehan is a qualified witness who followed NRC regulations in his economic analysis of PFS's decommissioning cost estimates. *See* Sheehan Utah S Testimony at 4.

3.12 Both PFS and the Staff argue that the limitations on Dr. Sheehan's expertise relative to answer 11, particularly in the areas of estimating costs and the aftermath of accidents, affect the weight to be accorded his testimony.[7] *See* PFS Findings at 75-76; PFS Response at 50; Staff Findings at 66-67. Notwithstanding

[7] During the evidentiary hearing, both PFS and the Staff argued in favor of striking answer 11 to Dr. Sheehan's testimony due to his lack of expertise in the subject matter (i.e., projected cleanup costs and the large accident probabilities). *See* Tr. at 2508-09, 2535-37. Additionally, the Staff cautioned against the admission of answer 11 on relevance grounds because the statistics Dr. Sheehan mentioned do not refer to the casks used or to any accident at the PFS site. *See* Tr. at 2535. The Board, however, denied both motions to strike answer 11 of Dr. Sheehan's direct testimony. *See* Tr. at 2509-10, 2537.

Dr. Sheehan's assertion that the studies cited in answer 11 are designed merely to provide an order of magnitude for cleanup costs, *see* Tr. at 2531-34, both PFS and the Staff argue that the cited figures are not probative of actual cleanup costs that may be incurred at the PFS facility. *See* PFS Findings at 75-76; Staff Findings at 67. Dr. Sheehan, as PFS points out, stated that the studies cited in answer 11 demonstrate cleanup costs are ''probably not zero.'' PFS Findings at 76; *see* Tr. at 2532-33. Further, PFS notes that key elements of the studies cited by Dr. Sheehan in answer 11 are different than those that can or will exist at the PFS facility (e.g., the use of transportation casks in the studies versus storage casks at the PFS facility). *See* PFS Findings at 75-76. PFS further emphasizes Dr. Sheehan's inability to describe the underlying assumptions of spent fuel oxidation in the event of a worst-case accident scenario. *See* PFS Findings at 76.

B. Financial Assurance Regarding Decommissioning Cost/Funding Matters

3.13 The State is concerned that the PFS DFP does not provide the appropriate measures of reasonable assurance for guarding the public health and safety as required by NRC regulations for ISFSIs (Part 72). *See* State Findings at 13. All three parties agree that the decommissioning regulations under Part 72 govern PFS's ISFSI application. Under Part 72, an application for an ISFSI must provide:

> (e) Except for DOE, information sufficient to demonstrate to the Commission the financial qualifications of the applicant to carry out, in accordance with the regulations in this chapter, the activities for which the license is sought. The information must state the place at which the activity is to be performed, the general plan for carrying out the activity, and the period of time for which the license is requested. The information must show that the applicant either possesses the necessary funds, or that the applicant has reasonable assurance of obtaining the necessary[ ] funds or that by a combination of the two, the applicant will have the necessary funds available to cover the following:
>
> * * * *
>
> (3) Estimated decommissioning costs, and the necessary financial arrangements to provide reasonable assurance before licensing, that decommissioning will be carried out after the removal of spent fuel, high-level radioactive waste, and/or reactor-related [Greater than Class C] waste from storage.

10 C.F.R. § 72.22(e).

3.14 Furthermore, each decommissioning plan must contain the following information:

> (a) Each application under [Part 72] must include a proposed decommissioning plan that contains sufficient information on proposed practices and procedures for

the decontamination of the site and facilities and for disposal of residual radioactive materials after all spent fuel, high-level radioactive waste, and reactor-related GTCC [(Greater than Class C)] waste have been removed, in order to provide reasonable assurance that the decontamination and decommissioning of the ISFSI or MRS [(Monitored Retrievable Storage Installation)] at the end of its useful life will provide adequate protection to the health and safety of the public. This plan must identify and discuss those design features of the ISFSI or MRS that facilitate its decontamination and decommissioning at the end of its useful life.

(b) The proposed decommissioning plan must also include a decommissioning funding plan containing information on how reasonable assurance will be provided that funds will be available to decommission the ISFSI or MRS. This information must include a cost estimate for decommissioning and a description of the method of assuring funds for decommissioning from paragraph (c) of this section, including means of adjusting cost estimates and associated funding levels periodically over the life of the ISFSI or MRS.

* * * *

(d) Each person licensed under this part shall keep records of information important to the decommissioning of a facility in an identified location until the site is released for unrestricted use. If records important to the decommissioning of a facility are kept for other purposes, reference to these records and their locations may be used. Information the Commission considers important to decommissioning consists of —

(1) Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records must include any known information on identification of involved nuclides, quantities, forms, and concentrations.

(2) As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored, and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.

(3) A list contained in a single document and updated no less than every 2 years of the following:

(i) All areas designated and formerly designated as restricted areas as defined under 10 CFR 20.1003; and

(ii) All areas outside of restricted areas that require documentation under § 72.30(d)(1).

(4) Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.

Id. § 72.30(a)-(b), (d). Licensees engaged in radiological decommissioning are required to conduct a decommissioning site survey in accordance with the provisions of 10 C.F.R. § 72.54(*l*)(2).

1. Cost/Funding Adjustments

a. Annual Review of Decommissioning Costs and Site Survey

3.15 An applicant for an ISFSI license is required to include in its decommissioning plan a mechanism for periodically reviewing and adjusting its decommissioning cost estimates during the life of the ISFSI. 10 C.F.R. § 72.30(b). The State asserts that the PFS proposed decommissioning plan for the Skull Valley site lacks a firm commitment to conduct an annual review and adjust projected costs due to real changes in inflation and costs, notwithstanding Mr. Parkyn's testimony that it will do so. *See* State Findings at 7. On the other hand, the State acknowledges PFS's intention to annually review and revise its decommissioning cost estimate for storage casks and the PFS site relative to changes in the rate of inflation as measured by the Bureau of Labor Statistics' Consumer Price Index (CPI). *See id.* The State claims that the PFS asserted intention to pass increased costs onto its customers in the event of increased decommissioning costs by itself is inadequate without the language of the service agreements to support this PFS assertion. *See* State Findings at 7-8.

3.16 Both PFS and the Staff argue that the State's argument on this issue is erroneous. PFS maintains that it is committed to performing annual reviews and adjustments due to inflationary, technological, or regulatory changes. *See* PFS Findings at 71. Further, PFS intends to conduct yearly audits on specific decommissioning items and the overall cost estimate on account of ''changes in the tasks, scope, cost or schedule for decommissioning.'' *See id.* The Staff argues that the DFP commits PFS annually to reviewing and revising its estimates for changes other than inflation (e.g., scope or cost of decommissioning). *See* Staff Response at 7. The Staff notes that PFS is not solely concerned with inflation when it annually reviews the cost estimate. *See* Staff Findings at 63.

3.17 The Staff concludes PFS will have sufficient funding to decommission its ISFSI, in part because of the service agreements binding customers to cost increases and a rate of return received on its decommissioning fund. *See* Staff Findings at 63; Staff Response at 6. According to the Staff, there is no requirement under Part 72 for an ISFSI licensee to commit to annual reviews of its decommissioning cost estimates. *See* Staff Response at 6. The Staff argues that Part 72 only requires a licensee to make periodic adjustments to its decommissioning cost estimates. *See* Staff Response at 6. In connection with Basis 10, which contests PFS's apparent lack of a cost escalation mechanism for a site survey, the Staff

argues PFS will include this item in its annual review of inflation and other real cost changes. *See* Staff Findings at 68.

3.18 PFS indicates it will include a provision in the service agreements requiring customers to be responsible for any increases in decommissioning costs discovered by the annual review. *See* PFS Findings at 71. PFS argues that it will pass increases in decommissioning costs onto any customers storing spent nuclear fuel at the facility, irrespective of whether they are current customers. *See id.* at 72. In fact, the Staff adds that PFS will commit its customers to funding decommissioning shortfalls until the PFS license terminates. *See* Staff Findings at 63. PFS contends that Part 72 does not mandate a more specific mechanism to account for increases in decommissioning costs than it already has provided. *See* PFS Response at 52.

b. Adjustment in the Letter of Credit

3.19 Although PFS expects to pay off its letter of credit within 2 years of commencement of operations, PFS points out that it will pursue an increased letter of credit when needed. *See* PFS Findings at 70-71. The State questions the likelihood that PFS can increase its letter of credit in the future to protect itself against a decommissioning funding shortfall, because Mr. Parkyn (a director of the bank issuing the letter of credit) will not be associated with the project when the license expires and PFS allegedly is an ''entity without any real assets.'' State Response at 3-4. Both the Staff and PFS rely upon Mr. Parkyn's testimony that PFS should be able to adjust its letter of credit in the future if decommissioning costs rise. *See* PFS Findings at 71-72; Staff Findings at 60-61. The Staff also finds the PFS $1,631,000 letter of credit acceptable under NRC regulations (10 C.F.R. § 72.30(c)(2)) and Staff guidance, *see* Staff Findings at 61; Tr. at 2549-50. PFS and the Staff state that there is no NRC requirement for an applicant using a letter of credit to show that it can obtain additional monies for future events. *See* PFS Findings at 72; Staff Findings at 61.

2. Storage Cask Decommissioning

3.20 Part 72 requires ISFSI license applicants to provide decommissioning financial assurance, which is to be provided through at least one of the following methods:

> (1) *Prepayment.* Prepayment is the deposit prior to the start of operation into an account segregated from licensee assets and outside the licensee's administrative control of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs. Prepayment may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities.

(2) A surety method, insurance, or other guarantee method. These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, letter of credit, or line of credit. . . . Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

(i) The surety method or insurance must be open-ended or, if written for a specified term, such as five years, must be renewed automatically unless 90 days or more prior to the renewal date, the issuer notifies the Commission, the beneficiary, and the licensee of its intention not to renew. The surety method or insurance must also provide that the full face amount be paid to the beneficiary automatically prior to the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the Commission within[ ] 30 days after receipt of notification or cancellation.

(ii) The surety method or insurance must be payable to a trust established for decom[m]issioning costs. The trustee and trust must be acceptable to the Commission. An acceptable trustee includes an appropriate State or Federal government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(iii) The surety or insurance must remain in effect until the Commission has terminated the license.

(3) An external sinking fund in which deposits are made at least annually, coupled with a surety method or insurance, the value of which may decrease by the amount being accumulated in the sinking fund. An external sinking fund is a fund establishing and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities. The surety or insurance provision must be as stated in paragraph (c)(2) of this section.

10 C.F.R. § 72.30(c).

3.21 In Basis 1, as modified by the parties' joint motion on April 7, 2000, the State alleged that PFS did not fulfill the Commission's requirement of reasonable assurance for sufficient funds to decommission the proposed facility under 10 C.F.R. § 72.30(b). Specifically, the State challenges the fact that the letter of credit sought by PFS, for $1,631,000, did not consider the amounts necessary for decommissioning the storage casks. *See* Joint Motion Attach. A at 1. PFS makes three arguments relative to Basis 1: (1) the State did not address this issue during the June 2000 evidentiary hearing; (2) in the alternative, modified Basis 1 is beyond the scope of contention Utah S as admitted because the original Basis 1 covered the ability of PFS to get a $1,631,000 letter of credit, not the decommissioning of storage casks or the prepayment of the associated costs; and (3) customers will prepay storage cask decommissioning costs, an approved

method of decommissioning funding under 10 C.F.R. § 72.30(c)(1). *See* PFS Findings at 67-68. PFS argues that its method of providing financial assurance to decommission the facility and the Skull Valley site, through a letter of credit coupled with an external sinking fund, is approved under 10 C.F.R. § 72.30(c)(2)-(3). *See id.* at 69-70. Finally, PFS states that it will begin with a letter of credit equivalent to 100% of the facility and site decommissioning costs, and then reduce the letter of credit as it places customer payments received over the life of the facility into an external sinking fund. *See id.* at 70.

3. Vintage of Cost Estimates

3.22 In Basis 4 and Basis 10, the State claims that the PFS ISFSI license application fails to specify what year's dollars are used in its cost estimates for a storage cask ($17,000 to decommission), the facility itself ($1,631,000 to decommission the rest of the PFS site), and a final site survey (estimated at $260,000). *See* Joint Motion Attach. A, at 1. NUREG-1567, the Staff's spent fuel dry storage facility standard review plan, indicates ISFSI license applicants are to submit a DFP that includes a cost estimate for decommissioning expressed in the year's dollars used, which should not precede the year in which the cost estimate is devised. *See* McKeigney/Wood Testimony at 5-6 (citing NUREG-1567, ''Standard Review Plan for Spent Fuel Dry Storage Facilities'' (Mar. 2000)). All three parties agree that any doubts pertaining to the vintage of the data (i.e., the year from which the underlying cost data were created) and the specific year's dollars used in the decommissioning plan were resolved by Mr. Parkyn's testimony that 1997 dollars apply. *See* State Findings at 6; PFS Findings at 70-71, 77; Staff Findings at 62, 68.

4. Decommissioning Cost Estimate Conservatism

3.23 In Basis 4, the State also claims that PFS has not conservatively predicted an upper bound for the number of fuel casks that will be located at the facility during the license term. *See* Joint Motion Attach. A at 1. PFS responds that its decommissioning cost estimate and funding plan recognize the maximum amount of spent fuel that will be located at the facility (i.e., 4000 casks). *See* PFS Findings at 73. Specifically, PFS states that its cost estimate is for decommissioning a particular spent fuel storage cask that accompanies each spent fuel canister kept at the facility; the cost estimate acknowledges the prepayment method employed to achieve financial assurance. *See id.* PFS intends to use the maximum quantity of spent fuel stored in computing site decommissioning costs, which is reflected in its cost estimates and accompanying letter of credit. *See id.* at 73-74.

C. Large-Scale Accidents and NRC Insurance Requirements

3.24 Under Basis 5, the State is concerned with the omission of the costs of potential large-scale accidents from the PFS DFP. *See* Joint Motion Attach. A. As mentioned above, Dr. Sheehan's testimony included a discussion of the consequences of large accidents in connection with transporting spent nuclear fuel. The State proposes that PFS include the potential costs of a large-scale accident in its proposed decommissioning plan to fulfill the requirement in section 72.30(a) that the plan ''provide reasonable assurance that the decontamination and decommissioning of the ISFSI . . . at the end of its useful life will provide adequate protection to the health and safety of the public.'' *See* State Findings at 9-10, 12-13. In the alternative, the State seeks a license condition mandating that PFS purchase minimum insurance coverage. *See id.* at 12-13; State Response at 6.

3.25 The parties acknowledge that Part 72 excludes any overt insurance requirements for ISFSI licensees. *See* State Findings at 11; PFS Findings at 75. The State asserts that because licensees face different requirements under Part 50 and Part 72 for possessing nuclear property insurance, large accident-related costs should not be treated the same way for ISFSI applicants as is the case with power reactor applicants. *See* State Findings at 11. According to the State, Part 50 excludes large accident costs from decommissioning cost estimates because there is a nuclear property insurance requirement. *See id.* Because Part 72 has no such insurance requirement, the State maintains, there is no reasonable assurance that the necessary decommissioning funds will be available. *See id.* at 11-12. The State has additional concerns over the extent and duration of the PFS onsite property insurance coverage, and the unknown accident potential at the Skull Valley site, *see id.* at 11-13, particularly because the uncertainties associated with military training activities (admitted contention Utah K) and earthquakes (admitted contention Utah L) at the Skull Valley site were not resolved as of the time the parties submitted their filings relative to Utah S, *see* State Response at 6-7. Additionally, the State notes that, according to a PFS witness on insurance for contention Utah E, one of the two major nuclear insurers in the United States, American Nuclear Insurers (ANI), may discontinue its domestic nuclear property insurance business. *See* State Findings at 12. Nonetheless, the State asks the Board to either reject PFS's application for want of ''reasonable assurance'' of sufficient funding, or to impose license conditions for minimum insurance coverage. *See* State Findings at 12-13; State Response at 6.

3.26 PFS states that although onsite property insurance is not mandatory under Part 72, it is permissible for ISFSI licensees, and PFS intends to purchase the amount of nuclear property insurance sufficient to cover potential accident costs. *See* PFS Findings at 75. In the view of PFS, the State proposes requirements

that are ''inconsistent'' with preexisting NRC regulations. *See* PFS Response at 55.

3.27 The Staff views the State's request to include accident recovery costs as part of the PFS decommissioning plan as ''an attack on the Commission's regulations and, as such, [it] cannot be considered.'' Staff Response at 9. According to the Staff, there is no regulation or guidance for including large accidents within the scope of decommissioning. *See* Staff Findings at 65-66. Indeed, the Staff declares, a proposed rule would separate potential accident recovery costs from decommissioning funding. *See id.* at 66. PFS and the Staff also maintain there is a difference in the level of risk between a Part 50 nuclear reactor and an ISFSI due to the characteristics of the fuel being held, a disparity recognized by the Commission in CLI-00-13. *See* PFS Response at 54; Staff Response at 8. According to the Staff, given that the Commission could have included large-scale accident recovery costs in a Part 72 DFP had it chosen to, this explains why no such requirement exists for ISFSIs. *See* Staff Response at 8. Dr. Sheehan, according to the Staff, mentioned that accident recovery costs would become an issue in decommissioning ''only if the contamination had not been cleaned up previously,'' yet there was no evidence that such a circumstance would actually occur. *See* Staff Findings at 66.

3.28 PFS argues that its onsite property insurance reasonably resolves the issue of considering potential costs of accident recovery at the Skull Valley site and, therefore, these costs do not need to be included in decommissioning. *See* PFS Response at 53. Acknowledging that the State questions the availability of nuclear property damage insurance over the life of the PFS facility, *see* State Findings at 12, PFS asserts that the surviving insurer will cover the entire U.S. nuclear industry and ''is owned by the nuclear plant owners within the nuclear industry.'' PFS Response at 53. PFS also claims that the contentions cited by the State to support its argument, contention Utah K and contention Utah L, concern the suitability of the Skull Valley site, not the consequences of radiological releases. *See id.* at 54. The Staff also maintains that not only is the State's argument regarding the number of domestic nuclear insurers that will exist in the future without basis, but it disregards the testimony that $50 million in onsite nuclear property insurance may be available elsewhere. *See* Staff Response at 9.

D. License Conditions

3.29 The State expresses doubt about the commitment in the allegedly ''abstract'' promises PFS made during the June 2000 evidentiary hearing and in its findings and conclusions. From the State's perspective, the Commission in CLI-00-13 refused to accept PFS's abstract promises from the adjudication and licensing process. As a result, the State wants the Board either to reject PFS's application, *see* State Findings at 13-14, or approve its own suggested license

conditions for promises PFS made relative to contention Utah S. *See* Initial State CLI-00-13 Response at 6-7.[8] If PFS faces additional license conditions, in the State's view, then the Staff can better monitor and enforce PFS commitments, while providing a degree of concreteness to PFS promises. *See id.* at 2. The State prefers specific license conditions to the complexities associated with simply examining service agreements. *See id.* Moreover, the State fears that by solely using service agreements without specific license conditions, the Staff would not be able to enforce any contractual duties because it is not in privity to any of the customer service contracts. *See id.* at 3. The State predicts that the Staff does not have the ability to enforce the previously made PFS promises absent license conditions, and the Staff will only act if PFS breaches a specific regulation, license condition, or order. *See id.* The State takes issue with the Staff's reluctance to suggest license conditions beyond those addressed by the Commission in CLI-00-13, arguing that the Commission was limited to issues that were on the record before it, which excluded costs, onsite insurance, and decommissioning. *See id.* at 4. In the alternative, the State claims that the Board has jurisdiction to formulate PFS's commitments into an order mandating that PFS follow certain requirements. *See id.* at 5 (citing *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), ALAB-898, 28 NRC 36, 41 (1988)).

3.30 As to the specific conditions the State seeks, it asks for a requirement that PFS annually review its decommissioning cost estimate and compare it to the levels of funding at that time. *See* State Findings at 8, 13-14. Further, pursuant to this license condition, if a shortfall in decommissioning funding is later uncovered, the State requests that PFS be required to address the deficit through one of the methods specified in 10 C.F.R. § 72.30(c) (e.g., prepayment; surety method, insurance, or other guarantee method; an external sinking fund), with any monies received from customers kept separate from PFS's control of liquid assets. *See id.* The State also urges the Board to impose a license condition that would require PFS to acknowledge potential accident recovery costs by including such expenditures in its decommissioning plan or through holding nuclear property insurance. *See id.* at 12-13. Moreover, the State wants PFS to expand its decommissioning funding levels (i.e., its letter of credit and/or external sinking fund) in the event PFS insurance becomes insufficient to cover potential accident recovery costs or PFS discontinues its coverage. *See id.* at 13. Additionally, the State seeks a license condition that PFS possess at least **x x x x x x x x x x x** in nuclear property insurance coverage. *See id.* And to the extent PFS becomes unable to receive such coverage in the future, the State wants a license condition that would require PFS to consider the probability of a

[8] The State's initial discussion of the impact of CLI-00-13 addressed contentions Utah E and Utah S.

large-scale accident at the Skull Valley site and potential accident recovery costs, and adjust its decommissioning cost estimate and funding levels accordingly. *See id.*

3.31 In response, PFS asserts that some of the State's proposed license conditions are superfluous because NRC regulations already contain the same mandates. *See* PFS Response at 53. PFS also claims that some of the State's proposed license conditions are based on an overstatement of the Commission's CLI-00-13 holding regarding license conditions. *See id.* at 5-6. In this regard, PFS views the State's proposed license conditions as encompassing ''every commitment and stated intention made by PFS in the licensing process, regardless of its nature or significance.'' *Id.* at 6. According to PFS, however, converting every commitment and stated intention put forth during a licensing adjudication into a license condition is not required under Part 72. In fact, PFS declares, such applicant commitments usually are included within the final safety analysis report submitted 90 days after the license is approved. *See id.; see also* 10 C.F.R. § 72.70(a).

3.32 PFS also maintains that the amount of insurance it intends to secure will cover potential accident recovery costs. *See* PFS Response at 55. In this regard, PFS challenges the State's proposed requirement that PFS include the amount of recovery costs greater than the commercially available level of insurance coverage in its decommissioning cost estimates as being contrary to NRC regulations. *See id.* PFS views the Commission's approach in CLI-00-13 as being one aimed at ensuring the sufficiency of the service agreements' incorporation of commitments previously made by PFS, as well as ''render[ing] not ripe for decision arguments made by the State in its findings that the Board should discount commitments made by PFS at the hearing regarding provisions that will be included in the Service Agreements.'' PFS CLI-00-13 Response at 2.

3.33 Finally, regarding the State's request for a license condition binding PFS to conduct annual reviews and updates of its cost estimates, PFS states that such a commitment is already part of its license application and repeats what it is required to do under 10 C.F.R. § 72.30(b). *See* PFS CLI-00-13 Response at 9. PFS further argues that contention Utah S does not cover nuclear property insurance because NRC decommissioning is not concerned with accident recovery costs. *See id.* at 10. Moreover, PFS points out, under CLI-00-13 the Commission imposed a license condition for PFS to secure a certain amount of nuclear property insurance. *See id.*

3.34 The Staff describes the State's interpretation of CLI-00-13 as ''overly broad'' and asserts that the only license conditions should be the ones that the Commission specifically listed in that decision. *See* Staff CLI-00-13 Response at 4. In particular, the Staff asserts that the State misunderstands the Commission's use of ''including'' by asserting it requires a complete listing of the PFS commitments made during this proceeding as license conditions, regardless of their

importance. *See id.* at 5. The Staff believes that only the seven requirements listed by the Commission in CLI-00-13 must be license conditions, arguing that NRC practice recognizes only significant matters as license conditions. *See id.* In the alternative, the Staff recommends that the Board refer its ruling to the Commission if it has any doubts about the appropriate use of license conditions consistent with CLI-00-13. *See id.* at 6-7.

3.35 Turning to the specific license conditions requested by the State, the Staff notes that licensees already have a duty periodically to review their cost estimates and associated funding levels. *See* Staff Response at 6. In addition, the Staff declares that no NRC regulation requires licensees to perform an accident consequence assessment. *See id.* Further, the Staff views the State's argument that PFS customers must be responsible for rising decommissioning cost estimates as having become moot, because the Commission in CLI-00-13 requires PFS to supply a sample service agreement with such a provision. *See id.* at 7. Further, regarding the State's proposed license condition that would require PFS to maintain **x x x x x x x x x x x x** in onsite nuclear property insurance, the Staff points out that PFS agreed to secure the maximum reasonably available amount of insurance, which is presently **x x x x x x x x x x x x.** *Id.* at 10. The Staff acknowledges that the Commission in CLI-00-13 charged the Staff with including a license condition for mandatory onsite (at a level of coverage to be determined at hearing) and offsite ($200 million, the maximum amount commercially available) insurance. *Id.*

3.36 Thus, as to contention Utah S, the Staff claims that CLI-00-13 ''does not substantially impact the resolution of the matters that are currently the subject of the parties' proposed findings of fact and conclusions of law.'' Staff Response at 39-40. The Staff contends that the CLI-00-13-directed sample service agreements will serve as a basis for verifying the PFS promises and rectifying any outstanding issues per the summary disposition and, if necessary, evidentiary hearing procedures outlined by the Commission. *See id.* at 40. According to the Staff, the license conditions required by the Commission in CLI-00-13 simply provide another means of affording financial assurance regarding decommissioning. *See id.*

IV. FACTUAL FINDINGS AND LEGAL CONCLUSIONS

A. Findings Regarding the PFS Application and Proposed Facility

4.1 PFS filed an application with the NRC in June 1997 pursuant to 10 C.F.R. Part 72 for a license that would allow it to construct and maintain an ISFSI for an initial 20-year period with the possibility of renewal for an additional 20 years. The PFS LA includes, among other things, an SAR and an emergency plan. The proposed ISFSI is designed to accommodate up to 4000 concrete storage

casks containing sealed metal canisters holding as much as 40,000 metric tons of uranium in the form of spent nuclear fuel from commercial nuclear reactors. *See* Staff Exh. A, encl. at 1-1 (Dec. 15, 2000 [NRC Staff] Safety Evaluation Report of the Site-Related Aspects of the [PFS ISFSI] (as revised Jan. 4, 2000) [hereinafter Staff SER]. The planned facility is to occupy 820 acres within the confines of the 18,000-acre reservation of the Skull Valley Band in Tooele County, Utah. *See id.* While there are no large towns within a 10-mile radius of the proposed ISFSI, the thirty-resident Skull Valley Band reservation village is located about 3.5 miles east-southeast of the PFS site. *See id.* PFS plans to fund the construction, operation, and decommissioning of the facility through equity contributions of its owners and by service agreements with member and nonmember customers. *See id.* at 17-3.

B. Findings and Conclusions Regarding the Parties' Witnesses Findings

4.2 We have previously discussed the parties' witnesses in section III.A above, which now serves as a basis for our findings to follow. First, we address the weight merited by each witness's testimony on the issues underlying contention Utah S.

4.3 In the event of a challenge to a witness's qualifications, the party offering that witness bears the burden of showing that the witness possesses sufficient expertise. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-410, 5 NRC 1398, 1405 (1977). There is no bright-line rule under the agency's rules of practice for evaluating a witness's expert qualifications. *See Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982). Rather, the Federal Rules of Evidence, and specifically Rule 702, provide a standard to gauge a witness's expert status, *id.,* even though the Federal Rules of Evidence are not binding and serve only as guidance for presiding officers, *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), LBP-01-9, 53 NRC 239, 250 (2001). Federal Rule of Evidence 702 provides:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Presiding officers have, in the past, accorded less weight to the testimony of a witness acknowledging no expertise in a specific area. *See Public Service Electric*

and Gas Co. (Hope Creek Generating Station, Units 1 and 2), LBP-78-15, 7 NRC 642, 647 n.8 (1978). NRC case law does allow a witness to be qualified through academic training or relevant experience, or a combination of both. *See Shearon Harris,* LBP-01-9, 53 NRC at 250.

4.4 The PFS witness for contention Utah S, John D. Parkyn, testified about the level of insurance commercially available and what amount PFS would obtain, as well as the PFS means of meeting the decommissioning financial assurance requirements. *See* Parkyn Utah S Testimony at 4-8. Mr. Parkyn possesses over 30 years of experience in the nuclear power industry, as well as a bachelor's degree in nuclear engineering. *See id.* at 1-2 & attached resume. His experience includes oversight of the decommissioning activities at the La Crosse Boiling Water Reactor, which ceased operations in 1987. *See id.* at 2 & attached resume; Tr. at 2427-35. Mr. Parkyn has been involved with the PFS project since 1994, Parkyn Utah S Testimony at 2, and is currently Chairman of the PFS Board of Managers, *id.* at 1. Mr. Parkyn's testimony did not go so far as to predict the magnitude of recovery from a potential accident affiliated with the PFS facility; rather, Mr. Parkyn testified regarding the amount of insurance coverage that would be sufficient to cover onsite recovery costs associated with a radiological accident at the facility. *See* Parkyn Contention E Testimony at 4. In light of Mr. Parkyn's experience in the nuclear industry and with the PFS project, we find Mr. Parkyn to be qualified to testify about his prior involvement in decommissioning and PFS's ability to meet NRC decommissioning requirements.

4.5 Staff witnesses Alex F. McKeigney and Robert S. Wood testified about the NRC's requirements pertaining to decommissioning, in particular those addressing financial assurance. Dr. McKeigney has a bachelor's degree in sociology and economics, a master's degree and a Ph.D. in sociology, and a master's of business administration degree. *See* McKeigney/Wood Testimony at attached resumes. Prior to his employment at the Commission, Dr. McKeigney dealt with electric utilities that control nuclear power reactors in a number of areas, including financing plans and corporate strategies. *See id.* Dr. McKeigney's work with the Office of Nuclear Reactor Regulation's Division of Regulatory Improvement Programs as a Financial Analyst encompasses decommissioning funding assurance. *See id.* at 2. Mr. Wood received a bachelor's degree in economics, a master's degree in public administration, and completed the qualifying coursework and exams for a Ph.D. in economics. *See id.* attached resume. Mr. Wood has an extensive background with the Commission and its predecessor, the United States Atomic Energy Commission, including work in the areas of nuclear property and liability insurance and decommissioning funding assurance. *See id.* Both Dr. McKeigney and Mr. Wood examined parts of PFS's application with respect to decommissioning funding assurance. *See id.* at 2-3. Although neither Dr. McKeigney nor Mr. Wood are cost estimators, *see* Tr. at 2603, the Board

finds that both Dr. McKeigney and Mr. Wood are qualified to testify about PFS's license application relative to NRC decommissioning requirements.

4.6 The State offered the testimony of Dr. Michael F. Sheehan to assess the sufficiency of the PFS decommissioning cost estimates through his training as an economist. *See* State Findings at 3. Both PFS and the Staff challenge the portion of Dr. Sheehan's testimony relating to estimating the probabilities and associated recovery costs for accidents involving the transportation of spent nuclear fuel, i.e., answer 11 of Dr. Sheehan's prefiled testimony. *See* PFS Findings at 75-76; PFS Response at 50; Staff Findings at 66-67. Answer 11 supports the State's argument that the Board should consider large-scale accidents in evaluating the financial assurance provided by PFS's decommissioning funding and approving its license application. *See* Sheehan Testimony at 7-9.

4.7 While the Staff points out the dissimilarities between the studies Dr. Sheehan cited and any accident that could occur relative to the facility, *see* Staff Findings at 66-67, PFS criticizes Dr. Sheehan's limited knowledge of the studies' details, *see* PFS Findings at 75-76. Dr. Sheehan could not explain the basis for an upper bound on accident recovery costs in the studies he cited. *See* Tr. at 2524. Moreover, testimony indicated that some of the casks in the studies were transportation casks rather than storage casks, which would have been more apropos relative to any potential accident connected with the facility. *See* Tr. at 2511-12. In fact, Dr. Sheehan could not state whether the casks in the studies were the same casks that PFS will use. *See* Tr. at 2513-14, 2517-18. Although Dr. Sheehan acknowledged that a canister-based system, such as the one that will be used by PFS, may provide additional safeguards against any potential accidents, he could not determine if any of the studies involved a sealed welded canister-based system. *See* Tr. at 2511-12. In addition, Dr. Sheehan was unaware of the enrichment, burnup, and age of the spent fuel in the studies, even though those factors could impact accident recovery costs. *See* Tr. at 2514, 2517. Moreover, Dr. Sheehan could not describe the assumptions behind spent fuel oxidation in the event of a worst-case scenario, and thus could not determine whether a similar event could take place at the PFS facility. *See* Tr. at 2519-21.

4.8 In addition, PFS and the Staff express concerns with Dr. Sheehan's inexperience in estimating costs and accident probabilities. *See* PFS Findings at 75; Staff Findings at 67. Neither PFS nor the Staff, however, directly contests the admissibility of Dr. Sheehan's testimony as a whole. Dr. Sheehan has a background in public utility economics, specifically planning and project budget and finance analysis. *See* Sheehan Utah E Testimony at 1. Further, Dr. Sheehan has performed financial qualifications work in connection with adjudications before the Commission. *See id.* at 2. At the June 2000 evidentiary hearing, however, Dr. Sheehan admitted that he does not predict the likelihood of accidents, nor has he projected ''radiological consequences of accidents or cleanup costs,'' notwithstanding answer 11. Tr. at 2492, 2508. Dr. Sheehan could not predict the

likelihood of potential accidents affiliated with the PFS ISFSI, despite cautioning that one should ''assume that there is some substantial risk pending the outcome of'' other contentions (i.e., those issue statements that concern events that could produce a radionuclide release). *Id.* at 2507-08.

4.9 The Board recognizes there are limitations to Dr. Sheehan's expertise in estimating probabilities of accidents and the accompanying costs and the applicability of the accident studies he cited. In this regard, we find Dr. Sheehan's testimony inadequate to establish a range of values or a specific figure for recovery costs from an accident affiliated with transporting spent nuclear fuel. Indeed, Dr. Sheehan's testimony indicated that recovery costs from an accident can attain any possible value ''other than zero,'' and that he merely intended to provide some order of magnitude. *See* Tr. at 2531-33. Therefore, the Board does not use Dr. Sheehan's testimony to establish accident probabilities or associated cleanup costs, but merely to note that a cost figure is ''possible.'' *See Hope Creek,* LBP-78-15, 7 NRC at 647 (where witness testified that an event was possible, viewed as meaning that ''almost *anything* can be considered to be possible''). Nonetheless, based on Dr. Sheehan's experience in the field of economics, we recognize Dr. Sheehan as being qualified to analyze the sufficiency of the PFS decommissioning plan, excluding matters related to accident probabilities and accident cost estimation.

C. Findings and Conclusions Regarding Decommissioning Cost/Funding Matters

1. Decommissioning Costs and Funding

4.10 The PFS facility will have a maximum storage capacity of up to 4000 casks, or 40,000 MTU of spent nuclear fuel (SNF), which is the basis for the PFS decommissioning cost estimate. *See* State Exh. 10, LA Chap. 1, at 4-1 (portions of the PFS license application, Chapter 1 (rev. 6), and the accompanying preliminary decommissioning plan (PDP), Appendix B (revs. 0 & 4)) [hereinafter LA]. According to PFS, it intends to follow a ''start clean, stay clean'' philosophy in operating the facility. *Id.* at 1-8. Nonetheless, PFS claims that its cost estimate for decommissioning embodies a conservative approach that predicts that some level of decontamination may occur. *See id.* at 1-8. As mandated by 10 C.F.R. § 72.30, PFS prepared a PDP in conjunction with its LA that describes the conceptual underpinnings for the decontamination and decommissioning of its proposed facility. A more detailed final decommissioning plan will be presented to the NRC for its review and approval at least 1 year prior to the final removal of the SNF canisters from the facility and no later than 1 year prior to expiration of the PFSF operating license. *See* LA, App. B at 1-1, 2-2. PFS expects to carry

out its decommissioning activities in a series of phases, some of which will be completed during the operational phase of the facility. *See id.* at 4-1.

4.11 PFS decommissioning estimates assume that, if used to its maximum storage capacity, certain PFSF areas and components will require decontamination as follows: (1) decommissioning storage casks at a cost of $17,000 for each used cask, for a total cost of $68,000,000 (1997 dollars); and (2) decommissioning of the rest of the facility at a cost of $1,631,000 (1997 dollars). *See* LA, App. B at 4-4, 4-6; Parkyn Utah S Testimony at 5. Relative to storage cask decommissioning, efforts undertaken at the originating reactors and when the SNF canisters are transported to the facility are designed to keep surface contamination levels within prescribed levels prior to their placement into storage casks. *See* LA, App. B at 4-3. Although PFS thus anticipates that the storage casks will be free of any radioactive contamination or activation, it nonetheless has estimated expenditures associated with initial decontamination at $365 per storage cask and $550 per storage cask for waste disposal. *See id.* at 4-3. For casks exhibiting fixed contamination or activation, PFS estimates a cost of $850 per cask to examine the type and degree of activation or fixed contamination. *See id.* PFS also estimates costs associated with residual activation or contamination of a steel storage cask liner at $3000 to dismantle and package the liner. Further, shipping and disposal costs for the low-level wastes associated with decontamination are estimated at $1400 for transportation and $3600 for disposal, but if the storage cask concrete is activated, it is estimated to require $1970 to scabble the cask and $270 to dispose of the concrete.[9] *See id.* at 4-4. The PFS cost estimate for decommissioning the remainder of the facility and the Skull Valley site includes expenditures affiliated with a site characterization survey ($250,000), decommissioning of four transfer casks ($200,000), decommissioning of eight shipping casks ($400,000), decontamination of the Canister Transfer Building ($230,000), storage pad decontamination ($241,000), final site release survey ($260,000), and independent verification survey ($50,000).[10] *See id.* at 4-4 to 4-7.

4.12 The cost for storage cask decommissioning is to be prepaid by PFS customers and held in an external escrow account in accord with 10 C.F.R. § 72.30(c)(1) before each spent fuel canister is transported to the facility, an arrangement that is to be reflected in customer service agreement commitments.

---

[9] Although the PFS initial storage cask decommissioning estimate was approximately $17,000 per cask, as the figures above indicate, this was later adjusted to $12,500 per cask. PFS nonetheless has decided to charge customers the original amount and maintain the balance (nearly $4500 per cask) as a contingency factor. *See* McKeigney/Wood Testimony at 7.

[10] The $1,631,000 total for decommissioning of the facility includes $400,000 and $200,000 for decommissioning of the shipping casks and transfer casks, respectively, which were overreported by a factor of 10 in an earlier version of the PDP, but remain in the total estimate as a contingency factor. *See* LA, App. B at 4-7.

See Parkyn Utah S Testimony at 4. By placing customer prepayments into an escrow account, PFS intends to collect all monies necessary for decommissioning before any need arises, such as radiation exposure. *See id.* at 4-5. PFS anticipates periodically adjusting the escrow account to reflect the remaining storage cask decommissioning efforts. *See* LA, App. B at 5-1 to 5-2. For a PFS customer to ship a spent fuel canister to the facility, service agreements require a prepayment of at least $17,000 into an externalized escrow account. *Id.* at 5-1. Moreover, because its decommissioning efforts will be ongoing, PFS theorizes it can finish storage cask decommissioning by the end of canister removal and offsite shipping operations. *See id.*

4.13 Facility size is a small factor in overall site decommissioning costs, with the only cost variances relating to the area of the concrete storage pads and any potential decontamination and waste removal costs for that area. *See* McKeigney/Wood Testimony at 7. In this regard, the PFS projected expenditures of $1,631,000 for decommissioning the remainder of the facility and the Skull Valley site are to be covered through a letter of credit and an external sinking fund in accordance with 10 C.F.R. § 72.30(c)(3). *See* LA Chap. 1, at 1-9. The letter of credit will be equal to the entire $1,631,000 estimated cost for decommissioning the site, although this amount may be adjusted as payments for decontamination and decommissioning costs are placed into the external sinking fund. *See* Parkyn Utah S Testimony at 4. PFS plans to receive site decommissioning payments from customers during the lifetime of the facility. *See id.* at 4. In this regard, customers will pay for any deficit in site decommissioning funding, as well as their share of the contamination-related costs, if any, produced from their stored SNF. *See id.* at 6.

4.14 Because storage cask decommissioning is an ongoing process, PFS intends to periodically revise the level of funds held in escrow. *See id.* In particular, PFS contemplates escalating the escrow amount and per-canister fee in accordance with annual reviews relative to inflation using the Bureau of Labor Statistics's CPI and changes in storage cask decommissioning costs (e.g., based on the activities, extent, cost, or timing of decommissioning). *See id.* at 5, 6. Based on service agreements, customers will face pro rata increases if storage cask decommissioning costs increase, even if their fuel is no longer stored at the facility. *See id.* at 6; Tr. at 2449-50, 2464. If decommissioning costs increase prior to an entity becoming a PFS customer, it will face higher decommissioning payments. *See* Parkyn Utah S Testimony at 6-7.

4.15 Regarding overall site decommissioning costs, PFS will annually review and adjust, if necessary, its letter of credit and external sinking fund for the facility and Skull Valley site based on inflation and the nature and cost of decommissioning. *See id.* at 6. All cost data in the PDP are listed in 1997 dollars. *See id.* at 5; Tr. at 2425. PFS will consider changes in cost as a result of new regulatory requirements, technology, labor, and other elements. *See* Tr. at

2426, 2435-36, 2438-39. Labor is considered by PFS as a ''primary driver'' for projecting decommissioning costs. *See* McKeigney/Wood Testimony at 9. PFS will account for cost changes due to labor through a regional CPI figure for urban wage earners. *See id.* The annual review aims to account for changes to specific decommissioning items and the total decommissioning estimate. *See* Parkyn Utah S Testimony at 5. PFS will pursue changes to the letter of credit based upon amounts paid into the external sinking fund and overall site decommissioning costs. *See id.* at 4; Tr. at 2425-26. Although the site survey cost estimate ($250,000) likewise is expressed in 1997 dollars, PFS will consider changes in this item through its annual review as well. *See* Parkyn Utah S Testimony at 8. Customers will be responsible for their pro rata share of any increase in overall site decommissioning costs as well as the costs of any contamination caused by the customer or anyone acting on its behalf. *Id.* at 6.

a. Annual Review of Decommissioning Costs and Site Survey

4.16 Relative to the decommissioning cost estimates for a storage cask, site, and site survey, the State contends in Basis 4 and Basis 10 that PFS's ''estimates are not properly escalated to convert past dollars values into future dollars values . . . .'' Joint Motion Attach. A at 1. In his testimony, Dr. Sheehan criticized PFS for limiting cost estimate adjustments to the national CPI. *See* Sheehan Utah S Testimony at 11. In addition, the State argues that PFS has not explicitly expressed an obligation in its decommissioning plan to making cost estimate adjustments on the basis of other factors, such as real changes in cost and inflation. *See* State Findings at 7. Consequently, the State asks for a licensing condition for PFS to perform annual reviews and adjustments of its decommissioning cost estimates, including use of the 10 C.F.R. § 72.30(c) methods to recover any funding shortfalls. *See id.* at 8.

4.17 NRC regulations and guidance explicitly require ISFSI applicants to perform periodic rather than annual reviews of their cost estimates. *See* 10 C.F.R. § 72.30(b) (a PDP must include ''means of adjusting cost estimates and associated funding levels periodically over the life of the ISFSI''); *see also* NUREG-1567, at 16-7 (applicant should provide a ''means for updating the cost estimate, on a periodic basis''). Therefore, by requesting a license condition that requires PFS to review and adjust its cost estimates on an annual basis, the State apparently is seeking a stricter requirement than that mandated by Commission regulations, which we decline to impose. *See* 10 C.F.R. § 2.758(a) (party challenge to an NRC regulation in an adjudicatory proceeding not permitted); *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 206 (2000) (denying intervenor request for a requirement ''more stringent'' than NRC regulations).

4.18 Be that as it may, the State's argument under Basis 4 and Basis 10 also is unavailing because, as PFS has already detailed in its PDP, it is committed to reviewing and adjusting decommissioning cost estimates annually. *See* LA, App. B at 5-2 to 5-3. The PDP states that PFS will annually review and adjust its external sinking fund and letter of credit due to inflation as measured by the CPI, as well as shifts in the scope or cost of decommissioning (through an annual review of the cost estimate). *See id.* at 5-2. Moreover, individual elements of the cost estimate will be consulted and updated on the basis of ''tasks, scope, cost[,] or schedule for decommissioning.'' *Id.* at 5-2 to 5-3. This application commitment mirrors testimony given by Mr. Parkyn that PFS will revise its decommissioning funding as a result of changes in the data underlying its estimates. *See* Tr. at 2438. As was noted above, Mr. Parkyn stated that PFS will make revisions due to labor, technology, and regulatory changes. *See id.* at 2426, 2435-39. Hence, PFS has not restricted its escalation factors to the inflation rate, but rather identified a number of factors to consider at the evidentiary hearing. Indeed, Dr. Sheehan indicated he was satisfied with Mr. Parkyn's response regarding escalation factors and revising the cost estimate due to technology or regulatory changes, thereby clarifying a few perceived uncertainties from the PFS decommissioning plan. *See* Tr. at 2494, 2495. Moreover, Dr. Sheehan's concerns about funding adequacy also are addressed by the stated PFS intent to have its customers cover any decommissioning funding shortfall. *See* Tr. at 2494. We, therefore, find that PFS has satisfactorily accounted for annual revision and escalation of its cost estimates.

b. Adjustment in the Letter of Credit

4.19 As we also noted above, site decommissioning will be accomplished jointly through a letter of credit and an external sinking fund consisting of customer decommissioning fund payments. *See* Parkyn Utah S Testimony at 4. While PFS envisions that it will have the letter of credit paid off within 2 years of commencing operations, it will increase the letter of credit if necessary (e.g., due to increased site decommissioning costs or customer payments received). *See id.* at 6; Tr. at 2439-42, 2449. For its part, PFS does not anticipate any difficulties in increasing its letter of credit. *See* Parkyn Utah S Testimony at 6.

4.20 The State, however, doubts the likelihood that PFS will actually be able to increase its letter of credit and cites a potential conflict of interest because Mr. Parkyn is Director of River Bank in La Crosse, Wisconsin, which is the bank issuing the PFS letter of credit. *See* State Response at 3-4. Dr. Sheehan found ''a high degree of uncertainty'' as to whether PFS could increase its letter of credit in the future. Sheehan Utah S Testimony at 12. Although Dr. Sheehan did not provide concrete support for his claim of uncertainty, the State dismisses PFS's commitment to increase the letter of credit as ''pure speculation,'' and further

argues that Mr. Parkyn may eventually leave the PFS project during the course of its license term. *See* State Response at 3-4. PFS and the Staff explain that PFS plans to use a letter of credit and external sinking fund in conformity with NRC regulations and guidance. *See* Parkyn Utah S Testimony at 5; Staff Findings at 61.

4.21 Notwithstanding the State's argument that there is a potential conflict of interest because Mr. Parkyn is a River Bank director, we find PFS has secured a letter of credit that meets applicable regulations and guidance. Under 10 C.F.R. § 72.30(c)(2), a letter of credit (or any other surety method) is an approved means of attaining financial assurance for decommissioning. Staff witnesses McKeigney and Wood, who both reviewed PFS's decommissioning plan, testified at the June 2000 evidentiary hearing that PFS's letter of credit conformed with NRC regulations and guidance. *See* Tr. at 2549. The State nonetheless argues that PFS will not be able to account for changes in decommissioning costs in the future. And in this regard, citing age concerns, Mr. Parkyn did acknowledge his likely absence from the PFS project at some point in the future. *See* Tr. at 2448. There is no evidence from the State, however, that PFS was only able to secure the letter of credit through Mr. Parkyn's connection to River Bank. Similarly, the State has not demonstrated that a future increase in the letter of credit rests upon Mr. Parkyn's continued service on the River Bank Board of Directors. The State merely speculates that PFS may not be able to increase its letter of credit in the future, an unsupported allegation we are unwilling to accord any significant weight. Furthermore, Staff witnesses McKeigney and Wood, both of whom have considerable familiarity with NRC regulations and guidance, stated there are no requirements or guidance for applicants relying upon a letter credit to show an ability to obtain additional funds for future events. *See* Tr. at 2549-50. This certainly is in congruity with the Commission recognition that Part 72 requires that an applicant demonstrate ''reasonable assurance'' of sufficient decommissioning funding, not an ''ironclad'' guarantee. *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 260 (1996).

4.22 In this regard, we are satisfied that PFS's decommissioning plan will provide sufficient financial assurance in the event PFS will need to obtain additional funding for decommissioning activities. First, in addition to the letter of credit, PFS will be using an external sinking fund supported by customer payments for site decommissioning costs. *See* Parkyn Utah S Testimony at 4. Under agency regulations, only as an external sinking fund increases (e.g., from customer payments received) can the value of the attending surety method decrease. *See* 10 C.F.R. § 72.30(c)(3). Second, PFS will include commitments in its service agreements binding customers to fund any additional amounts for decommissioning based upon their pro rata usage of the facility. *See* Parkyn Utah S Testimony at 6; Tr. at 2449. Moreover, if a customer or anyone acting on the customer's behalf creates a need for decontamination efforts to be taken, PFS

intends to charge that customer for the cleanup, rather than draw upon its letter of credit. *See* Parkyn Utah S Testimony at 6; Tr. at 2450-51.

4.23 Furthermore, the PFS decommissioning funding scheme has an additional conservatism in that it does not take into account a real rate of return on the funds kept in its decommissioning account during the facility's lifetime, notwithstanding the provisions of Part 50 that approve accounting for a 2% real rate of return on such escrow accounts for nuclear reactors. *See* Parkyn Utah S Testimony at 6. Applying a 2% real rate of return on the decommissioning account over a period of 40 years (i.e., the initial 20-year license term plus an additional 20-year renewal period) can ''increase the value of the funds by 120 percent before taxes.'' *Id.* We find support for this prognosis in Mr. Parkyn's experience in decommissioning the La Crosse nuclear power plant, during which there was a greater than 2% rate of return on the decommissioning funds. *See* Tr. at 2473-74; Parkyn Utah S Testimony at 2-3. In contrast, the State has not justified its ''conclusory fears'' about problems arising from future increases in the cost estimate. *Yankee Rowe,* CLI-96-7, 43 NRC at 263. Based on the preponderance of evidence before us, we have no difficulty concluding that if there is a need for increased decommissioning funding in the future, PFS will be able to secure additional monies via a larger letter of credit or otherwise.

2. Findings and Conclusions Regarding Storage Cask Decommissioning

4.24 In modified Basis 1, the issue is posited as to whether PFS has shown financial assurance for decommissioning notwithstanding the exclusion of storage cask decommissioning costs in its $1,631,000 letter of credit for site and facility decommissioning. *See* Joint Motion Attach. A. At the time of the joint motion, PFS reserved the right to challenge Basis 1, arguing that it was not within the scope of the original Basis 1. *See id.* The State did not present any arguments at the June 2000 evidentiary hearing regarding the sufficiency of PFS's plan for storage cask decommissioning, either through its own witnesses or those of PFS or the Staff. Although the State addressed the PFS letter of credit through the witnesses that testified relative to contention Utah S, it did not do so within the context of storage cask decommissioning.

4.25 The Board has the discretion to dismiss a contention for default where a sponsoring party does not pursue it at hearing, in other words an ''abandoned contention.'' *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-00-5, 51 NRC 64, 67-68 (2000). Or, it could take up our previously deferred ruling on a PFS prehearing brief contending that modified Basis 1 was outside the scope of the contention as originally admitted, due to ripeness, *see* Licensing Board Memorandum and Order (Ruling on In Limine Motions and Providing Administrative Directives) (June 12, 2000) at 8 n.2, and find that as originally admitted, contention Utah S ''does not provide the vehicle''

for the State's arguments on storage cask decommissioning relative to PFS's letter of credit. *See* LBP-01-23, 54 NRC 163, 172 (2001); *see also Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 n.11 (1988) (noting that ''an intervenor is not free to change the focus of an admitted contention, at will, as the litigation progresses''). Nonetheless, we find on the merits of the State's argument in Basis 1 that PFS meets its burden to demonstrate financial assurance under 10 C.F.R. § 72.30. By its definition, ''[p]repayment is the deposit prior to the start of operation into an account segregated from licensee assets and outside the licensee's administrative control of cash or liquid assets . . . [and] may be in the form of . . . [an] escrow account . . . .'' 10 C.F.R. § 72.30(c)(1). In this instance, PFS has followed the provisions of section 72.30(c)(1) as to storage cask decommissioning because customer payments are received prior to shipment of the spent fuel and kept in an external prepaid account.

3. Findings and Conclusions Regarding Vintage of Cost Estimates

4.26 The State contends that PFS's license application omitted any reference to the year's dollars used or upon which the raw data were generated for its cost estimates to decommission a cask, the facility, and a final site survey. *See* Joint Motion Attach. A. As stated above, NUREG-1567 indicates ISFSI applicants are to submit a cost estimate for the entire scope of the decommissioning plan, described in a specific year's dollars. *See* NUREG-1567, at 16-7; McKeigney/Wood Testimony at 6. The cost estimate should be stated in a year's dollars no less recent than the year in which it was assembled. *See* NUREG-1567, at 16-7. Dr. Sheehan stated that the vintage of the data and the year's dollars used for the cost estimate ensure the estimate's accuracy as to the rate of inflation and the real cost increase. *See* Sheehan Utah S Testimony at 10-11.

4.27 At the June 2000 evidentiary hearing, Mr. Parkyn testified that the estimates and vintage of the data were in 1997 dollars. *See* Parkyn Utah S Testimony at 5, 8; Tr. at 2425. Dr. Sheehan, the State's witness on contention Utah S, was satisfied with Mr. Parkyn's answers on these issues, insofar as Mr. Parkyn's testimony is correct. *See* Tr. at 2494, 2495-96. Although PFS's preliminary DFP contained no reference to the year's dollars used for its cost estimates, Staff witnesses McKeigney and Wood testified that the Staff's understanding was that all cost estimate figures were stated in 1997 dollars based on PFS's revised license application. McKeigney/Wood Testimony at 9. A conference call between Mr. Parkyn and the Staff on May 9, 2000, confirmed this result. *Id.* There was no contrary testimony presented at trial on the issues of year's data used or vintage of data, and the parties agree that these issues were resolved. Thus, we find that with respect to Basis 4 and Basis 10, the vintage of the data and PFS's cost estimates are reflected in 1997 dollars.

4. Findings and Conclusions Regarding Cost Estimate Conservatism

4.28 The State asserted in amended Basis 4 that PFS, as the ISFSI Applicant, should follow a conservative approach in its decommissioning projections. Staff witnesses McKeigney and Wood agreed that PFS should, and did, use a conservative approach in predicting the maximum amount of spent fuel casks that will be located at the facility during the license term. *See* McKeigney/Wood Testimony at 10-11. We agree and find that PFS employed a conservative approach in its license application with respect to storage cask decommissioning and site decommissioning. First, under storage cask decommissioning, PFS will utilize a spent fuel canister-specific cost estimate and have customers prepay storage cask decommissioning fees to directly project the maximum amount of spent fuel that the facility will hold. *See* Parkyn Utah S Testimony at 7. Second, PFS will account for site decommissioning by projecting costs and the letter of credit that accompany a full-capacity facility, i.e., 4000 casks or 40,000 MTU. *See id.*

D. Findings and Conclusions Regarding Large Accidents and NRC Insurance Requirements

4.29 In the context of its modified Basis 5, the State also contends that PFS should consider the potential for large accidents affiliated with the ISFSI in its decommissioning cost estimates, due to the scope of the operation and its impact on decommissioning costs. Joint Motion Attach. A. State witness Sheehan asserts that a conservative cost estimate for the facility accounts for the risks of accidents and accompanying radionuclide release through either insurance or its decommissioning cost estimates, *see* Sheehan Utah S Testimony at 7, an argument the State uses to bolster its request to require PFS to account for accidents in its cost estimates, *see* State Findings at 12-13.

4.30 We, however, agree with PFS and the Staff that Part 72 ISFSI licensees, like Part 50 nuclear reactor licensees, *see* 10 C.F.R. § 50.54(w), face no requirement for including potential accident recovery costs within decommissioning cost estimates. Dr. Sheehan could not identify any NRC regulations that required large accidents be included within the scope of ISFSI decommissioning. *See* Tr. at 2496; *see also* McKeigney/Wood Testimony at 11. Although the NRC does not require ISFSI licensees under Part 72 to obtain onsite property insurance to cover potential accident cost recovery, that cost nonetheless is accounted for by the nuclear property damage insurance PFS will obtain to cover the facility, as is discussed below, and so need not be counted separately as a decommissioning cost. *See* 50 Fed. Reg. 5600, 5606 (Feb. 11, 1985) (proposed rule indicating that ''[a]ssurance of funds for post-accident cleanup is more properly covered by use of insurance'' rather than under a decommissioning rule).

4.31 In this regard, potential onsite accident recovery costs would be covered under PFS nuclear property damage insurance. *See* Parkyn Utah S Testimony at 7. PFS intends to purchase the highest level of onsite nuclear property insurance ''available at reasonable costs and at reasonable terms from private sources,'' which was **x x x x x x x x x x x x** at a **x x x x x x x x** annual premium at the time of Mr. Parkyn's testimony relative to contention Utah E. *See* Testimony of John Parkyn on Onsite Property Insurance for the Facility Contention Utah E/Confederated Tribes F (fol. Tr. at 2173) at 4 [hereinafter Parkyn Utah E Testimony]. Specifically, Nuclear Electric Insurance Limited (NEIL) is willing to supply up to **x x x x x x x x x x x x** for onsite property coverage at an annual premium of **x x x x x x x x,** while overseas insurers are able to offer **x x x x x x x x x x** at an annual premium of **x x x x x x x.** *See id.* at 4. Further, although PFS contends that $70 million in nuclear property insurance coverage would be more than adequate for onsite coverage in the event of a radiological incident at the facility, PFS nonetheless intends to secure the greatest amount of nuclear property insurance available for its ISFSI for a total annual premium of **x x x x x x x x** in year 2000 dollars. *See id.* at 4-5. Moreover, if the level of coverage commensurate with a **x x x x x x x x** premium falls under $70 million in year 2000 dollars, PFS will increase its coverage or conduct an accident consequences assessment to calculate the recovery costs from the maximum potential radiological accident and obtain an appropriate amount of coverage. *See id.* In no case, however, will PFS obtain more insurance than is available at reasonable costs and terms from the commercial sector or as required by the NRC by rulemaking. *See id.*

4.32 As we noted in our ruling today on contention Utah E, we consider this arrangement sufficient to establish PFS financial assurance relative to onsite insurance consistent with the Commission's directives on this subject in CLI-00-13.[11] *See* Partial Initial Decision of May 27, 2003, LBP-05-21, 62 NRC 248, 324-25 (2005). We also find that the State has not provided any support for its claim that coverage may not be available over the life of the facility because there may be only one domestic nuclear property insurance provider at some point in the future. The State does not account for the fact that NEIL, which would be providing nuclear property insurance for the entire United States nuclear industry, is an entity financially backed (through membership status) by virtually all the nuclear plant owners in the United States. *See* Tr. at 1801-02. Moreover, PFS intends to secure insurance from both NEIL *and* overseas insurers. *See* Parkyn Utah E Testimony at 4.

[11] To the degree Dr. Sheehan seeks increased insurance coverage based on inclusion of accident probabilities due to earthquakes (contention Utah L) or military training (contention Utah K) as causes of possible accidents at the facility, his argument is misdirected because these contentions address the suitability of the Skull Valley site for the facility, rather than the consequences of an accident or associated cleanup costs. *See* LBP-98-7, 47 NRC at 253.

E. Findings and Conclusions Regarding License Conditions

4.33 In CLI-00-13, 52 NRC at 29, the Commission held that license conditions could be used to achieve a reasonable assurance that PFS meets the financial qualification requirements under 10 C.F.R. Part 72 for operating an ISFSI facility. As was noted in section III.E above, the State has requested the imposition of a number of license conditions relative to contention Utah S. In this instance, however, we have substantively rejected the merits of arguments underlying the requested State license conditions in the areas of annual reviews and subsequent cost estimate adjustment (section IV.C.1) and insurance (section IV.D). Thus, there is no need for us to address the sufficiency of these State proposed conditions. *See Power Authority of the State of New York* (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-01-14, 53 NRC 488, 558-59 (2001) (declining to address intervenor's proposed license conditions when the merits of decommissioning funding assurance argument were rejected). Further, we reject the State's suggestion that basically every commitment expressed by PFS during the June 2000 evidentiary hearing and in its findings and conclusions should be transformed into a license condition. *See* CLI-01-9, 53 NRC 232, 235 (2001). Thus, we find that the State's proposed license conditions are unnecessary, and decline to adopt them in whole or as part of a Board order.[12]

V. SUMMARY FINDINGS OF FACT AND CONCLUSIONS OF LAW

5.1 Having considered all the evidence submitted by the parties in this proceeding, including the proposed findings of fact and conclusions of law, based on the findings and conclusions set forth in section IV above, the Board finds that PFS has met its burden under 10 C.F.R. § 72.22(e) to establish reasonable assurance that it is financially qualified to decommission its proposed Skull

[12] Although we would not have imposed the requested conditions in any event, the fact that the principal State's concerns are now covered under the MSA provisions submitted by PFS in accordance with CLI-00-13 seeks to further highlight that the need for such conditions is lacking. *See, e.g.,* [PFS] Motion for Summary Disposition on Issues Remanded by CLI-00-13 on Utah Contention E and Confederated Tribes Contention F and Response to State of Utah's Objections to the Adequacy of [PFS MSA] To Meet Part 72 Financial Assurance Requirements (Dec. 4, 2000), Declaration of John Parkyn, Exh. 1, at 32-33, 34-35 (Model Agreement for Storage of Spent Nuclear Fuel by and between [PFS] and ____ (Dec. 4, 2000)) (section 13.5.1, dealing with decommissioning costs that makes customers responsible for proportional share of all facility decommissioning costs and requires preshipment payment of $40,000 per canister (in 1997 dollars), subject to annual PFS adjustment, including adjustment for inflation, and section 13.6, making customer liable for all PFS costs incurred in connection with decontamination efforts associated with customer's use of PFS equipment or customer-loaded casks/canisters).

Valley, Utah facility, such that the public health and safety will be protected. Therefore, relative to the issues raised in contention Utah S, the Board finds those matters are resolved in favor of PFS.[13]

6.1 Pursuant to 10 C.F.R. § 2.760, it is this 27th day of May 2003, ORDERED, that this Partial Initial Decision will constitute a final decision of the Commission forty (40) days from the date of issuance, or on *Monday, July 7, 2003,* unless a petition for review is filed in accordance with 10 C.F.R. § 2.786, or the Commission directs otherwise. Any party wishing to file a petition for review on the grounds specified in 10 C.F.R. § 2.786(b)(4) must do so within fifteen (15) days after service of this Partial Initial Decision. The filing of a petition for review is mandatory in order for a party to have exhausted its administrative remedies before seeking judicial review. Within ten (10) days after service of a petition for review, parties to this proceeding may file an answer supporting or opposing Commission review. Any petition for review and any answer shall conform to the requirements of 10 C.F.R. § 2.786(b)(2)-(3).

6.2 Given previous party positions suggesting that financial assurance-related information may include proprietary or other sensitive data, on or before *Friday, June 20, 2003,* the State, PFS, and the Staff shall provide the Board with a joint filing outlining each (1) proposed redaction of any part of this Partial Initial Decision to which there is no objection; (2) proposed redaction of any part of this Partial Initial Decision to which there is an objection; and (3) proposed redaction of any part of the cross-examination plans submitted by the parties to the Board in connection with the evidentiary presentations on contention Utah S. The particular word or phrase to be withheld from public release shall be specified for each proposed redaction; blanket requests for withholding are disfavored. Further, in accordance with 10 C.F.R. § 2.790, the party seeking the proposed redaction shall at the same time provide a separate submission that describes with specificity (as supported by any necessary affidavits) the reasons for withholding

---

[13] Recently, in the form of a motion for reconsideration of its decision in LBP-03-4, 57 NRC 69 (2003), regarding State concerns over the probability of military aircraft accidents in connection with the Skull Valley facility, PFS has put before the separate Licensing Board chaired by Administrative Judge Farrar the possibility of authorizing initial construction and operation of a significantly smaller, 336-cask facility. Currently, the license application before this Board outlines plans for a very differently sized facility, and it is upon the basis of that application that we make our ruling today.

each proposed redaction from the public. Responses by any party objecting to a proposed redaction shall be filed on or before *Monday, June 30, 2003.*

THE ATOMIC SAFETY AND
LICENSING BOARD[14]

G. Paul Bollwerk, III, Chairman
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland
May 27, 2003

[14] Pursuant to previous Board issuances on e-mail service of documents identified as potentially containing proprietary information, copies of this Partial Initial Decision were sent this date by Internet e-mail transmission to counsel for PFS, the State, and the Staff. In addition, this date a memorandum was sent by e-mail to all the parties to this proceeding advising them of the issuance of this Decision and the Board's determination to afford this Decision confidential treatment pending a response by PFS, the State, and the Staff to the Board's inquiry under paragraph 6.2 above. *See* Licensing Board Memorandum and Order (Notice Regarding Issuances Concerning Contentions Utah E/Confederated Tribes F and Contention Utah S) (May 27, 2003) (unpublished).

Although agreeing with the result reached here, because of illness Judge Kline was unavailable to participate in the final preparation of this Decision.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Dr. Jerry R. Kline
Dr. Peter S. Lam

In the Matter of **Docket No. 72-22-ISFSI**
(ASLBP No. 97-732-02-ISFSI)

PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage Installation) **January 5, 2004**

In this proceeding on a 10 C.F.R. Part 72 application by Private Fuel Storage, L.L.C. (PFS), for a license to construct and operate an independent spent fuel storage installation (ISFSI) on the Skull Valley, Utah reservation of the Skull Valley Band of Goshute Indians, the Licensing Board grants in part and denies in part a motion filed by PFS requesting clarification and/or reconsideration of the Board's May 27, 2003 memorandum and order ruling on a PFS summary disposition motion and other filings relating to the Commission's remand from CLI-00-13, 52 NRC 23 (2000), and a partial initial decision issued that same date regarding the merits of contention Utah E/Confederated Tribes F, Financial Assurance.

MOTION FOR RECONSIDERATION: STANDARDS FOR SUPPORTING

RULES OF PRACTICE: MOTIONS FOR RECONSIDERATION

As previously noted:

> A properly supported reconsideration motion is one that does not rely upon (1) entirely new theses or arguments, except to the extent it attempts to address

> a presiding officer's ruling that could not reasonably have been anticipated, *see Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-2, 45 NRC 3, 4 & n.1 (1997) (citing cases); or (2) previously presented arguments that have been rejected, *see Nuclear Engineering Co.* (Sheffield, Illinois Low-Level Radioactive Waste Disposal Site), CLI-80-1, 11 NRC 1, 5 (1980). Instead, the movant must identify errors or deficiencies in the presiding officer's determination indicating the questioned ruling overlooked or misapprehended (1) some legal principle or decision that should have controlling effect; or (2) some critical factual information. *See Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), LBP-94-31, 40 NRC 137, 140 (1994); *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), LBP-83-25, 17 NRC 681, 687, *rev'd and remanded on other grounds,* ALAB-726, 17 NRC 755 (1983).

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-17, 48 NRC 69, 73-74 (1998). In addition, as observed on another occasion:

> Although a party may not base a reconsideration motion on new information or a new thesis, *see* LBP-98-10, 47 NRC [288,] 292 [1998] (citing *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-2, 45 NRC 3, 4 (1997)), a request to reexamine existing record material that may have been misunderstood or overlooked, or to clarify a matter that the party believes is unclear, is appropriate, *see id.* at 296-97 (citing *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), LBP-83-25, 17 NRC 681, 687 (1983)).

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-99-39, 50 NRC 232, 237 (1999).

MEMORANDUM AND ORDER
(Granting in Part and Denying in Part Motion for Reconsideration and/or Clarification of Financial Qualifications Decisions)

[*Note:* Although this Memorandum and Order was originally issued in January 2004, it was treated as a nonpublic issuance pending review of challenges by Intervenor State of Utah to claims by Applicant Private Fuel Storage, L.L.C., that pursuant to 10 C.F.R. § 2.790 certain portions of the decision should be withheld from public disclosure as proprietary information. With issuance of the Commission's final decision on that matter, *see* CLI-05-16, 62 NRC 1 (2005), this decision is being publicly released in a redacted form.]

Pending with this Licensing Board is a June 6, 2003 motion filed by Applicant Private Fuel Storage, L.L.C. (PFS), requesting clarification and/or reconsideration of the Board's May 27, 2003 memorandum and order ruling on a PFS summary disposition motion and other filings relating to the Commission's remand from

CLI-00-13, 52 NRC 23 (2000), and a partial initial decision issued that same date regarding the merits of contention Utah E/Confederated Tribes F, Financial Assurance. The State of Utah (State), the Lead Intervenor on contention Utah E/Confederated Tribes F, opposes the PFS request, while the NRC Staff supports the motion in part and opposes it in part. For the reasons set forth below, we grant the motion in part and deny it in part.

I. BACKGROUND

Although detailed descriptions of the events leading up to the two decisions that are the subject of the pending PFS reconsideration request are outlined in those issuances, to place the motion in context we note here that the object of this proceeding is the June 1997 application for a 10 C.F.R. Part 72 license through which PFS seeks agency permission to construct and operate an independent spent fuel storage installation (ISFSI) on the reservation of the Skull Valley Band of Goshute Indians (Skull Valley Band) in Skull Valley, Utah. Following a notice of opportunity for a hearing, *see* 62 Fed. Reg. 41,099 (July 31, 1997), the State and the Confederated Tribes of the Goshute Reservation (Confederated Tribes) filed petitions to intervene pursuant to 10 C.F.R. § 2.714, which the Board subsequently granted. *See* LBP-98-7, 47 NRC 142, 157, *aff'd on other grounds,* CLI-98-13, 48 NRC 26 (1998). In doing so, the Board admitted in part and consolidated two of these parties' financial assurance contentions into contention Utah E/Confederated Tribes F, with the State being designated as the Lead Intervenor for litigation of this contention. *See id.* at 187, 236; Licensing Board Memorandum and Order (Memorializing Prehearing Conference Rulings) (May 20, 1998) at 2 (unpublished).

PFS subsequently filed a motion requesting summary disposition on all portions of contention Utah E/Confederated Tribes F, except paragraph 6. *See* [PFS] Motion for Partial Summary Disposition of Utah Contention E and Confederated Tribes Contention F (Dec. 3, 1999) at 3. The State opposed the motion, while the Staff, in supporting the motion, outlined two proposed license conditions to implement financial assurance-related commitments made by PFS.[1] *See* [State] Response to the [PFS] Motion for Partial Summary Disposition of Utah Contention

[1] Those proposed license conditions provided:

''A. Construction of the [PFS] Facility shall not commence before funding (equity, revenue, and debt) is fully committed that is adequate to construct a Facility with the initial capacity as specified by PFS to the NRC [**x x x x x x x x x x** capacity]. Construction of any additional capacity beyond this initial capacity amount shall commence only after funding is fully committed that is adequate to construct such additional capacity.

(Continued)

E/Confederated Tribes Contention F (Dec. 27, 1999) at 3-14; NRC Staff's Response to [PFS] Motion for Partial Summary Disposition of Utah Contention E and Confederated Tribes Contention F (Dec. 22, 1999) at 4-5.

On March 10, 2000, the Board granted in part and denied in part the PFS dispositive motion and found that the license conditions proposed by the Staff could appropriately be used to establish compliance with 10 C.F.R. § 72.22(e) financial assurance requirements. *See* LBP-00-6, 51 NRC at 113-17. The only contention Utah E/Confederated Tribes F-related issues thus remaining for further Board consideration in an evidentiary proceeding were (1) the adequacy of PFS's onsite property insurance coverage (paragraphs 5 and 10); and (2) the adequacy of the PFS construction and operating cost estimates (paragraph 6). Also in connection with this determination, the Board referred to the Commission its ruling endorsing the application to Part 72 ISFSI facilities of the financial assurance standard for Part 70 uranium enrichment facilities, rather than that for Part 50 power reactor facilities, in accord with the Commission's decision in *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294 (1997). *See id.* at 136. The Board then held evidentiary hearings in Salt Lake City, Utah, during which eight witnesses testified on behalf of PFS, the Staff, and the State on June 20-22, 27, 2000, regarding contention Utah E/Confederated Tribes F. *See* Tr. at 1673-2413, 2556-2681.

Thereafter, in August 2000, the Commission ruled on the March 2000 referral of the Board's summary disposition order regarding contention Utah E/Confederated Tribes F. *See* CLI-00-13, 52 NRC 23 (2000). The Commission accepted the proposition that license conditions should be adopted to incorporate various PFS financial assurance-related promises, including those relating to funding commitments and in-place service agreements with prices adequate to finance operations and maintenance and decommissioning expenses for the life of the PFS license.[2] However, the Commission disagreed that, in the absence of a model service agreement (MSA), PFS commitments alone provided a sufficient basis for a reasonable assurance finding based on post-licensing Staff inquiry. *See id.* at 32. As a consequence, the Commission directed that an MSA be provided by

---

> B. PFS shall not proceed with the Facility's operation unless it has in place long-term Service Agreements with prices sufficient to cover the operating, maintenance, and decommissioning costs of the Facility, for the entire term of the Service Agreements.''

LBP-00-6, 51 NRC 101, 109 (2000) (quoting NRC Staff's Response to [PFS] Motion for Partial Summary Disposition of Utah E/Confederated Tribes F (Dec. 22, 1999) at 7).

[2] The Commission indicated that LC 17-2 should read:

> PFS shall not proceed with the Facility's operation unless it has in place Service Agreements covering the entire term of the license, with prices sufficient to cover the operating, maintenance, and decommissioning costs of the Facility for the entire term of the license.

CLI-00-13, 52 NRC at 32.

PFS that met all the PFS commitments relied upon by the Board in making its adequate financial assurance findings.[3] *See id.* at 34-36.

PFS filed its MSA on September 29, 2000, in accordance with the Board's scheduling order, along with a summary of the financial provisions and a request that proprietary information remain confidential. *See* [PFS] Submission of [MSA] (Sept. 29, 2000); Licensing Board Order (Schedule for Submission of Sample Service Agreement) (Aug. 16, 2000) at 1-2 (unpublished). The State then filed a motion to reopen the hearing record on contention Utah E/Confederated Tribes F and subsequently submitted objections to the MSA as unable to meet Part 72 financial assurance requirements. *See* [State] Motion To Re-open the Hearing Record on Contention Utah E (Nov. 7, 2000) at 1 (State Motion); [State] Objections to the Adequacy of the [PFS MSA] To Meet Part 72 Financial Assurance Requirements (Nov. 7, 2000) at 1. On December 4, 2000, PFS responded by moving for summary disposition on the ground that no genuine issue as to any material fact remained relative to the issues remanded by the Commission, a request PFS supported with an updated MSA and one which the State opposed and the Staff did not. *See* [PFS] Motion for Summary Disposition on Issues Remanded by CLI-00-13 on Utah Contention E and Confederated Tribes Contention F and Response to [State] Objections to the Adequacy of [PFS MSA] To Meet Part 72 Financial Assurance Requirements (Dec. 4, 2000) at 1, 4-8; [State] Response to [PFS] Motion for Summary Disposition on Issues Remanded by CLI-00-13 on Utah Contention E/Confederated Tribes Contention F (Dec. 22, 2000); NRC Staff's Response to ''[PFS] Motion for Summary Disposition on Issues Remanded by CLI-00-13 on Utah Contention E and Confederated Tribes Contention F and Response to [State] Objections to the Adequacy of [PFS MSA] To Meet Part 72 Financial Assurance Requirements'' (Dec. 20, 2000).

In a May 27, 2003 memorandum and order, the Board denied the State's reopening motion and granted the PFS dispositive motion regarding contention Utah E/Confederated Tribes F, but phrased the financial assurance license conditions LC 17-1 and LC 17-2 [hereinafter LC-1 and LC-2, respectively] differently than the Staff's license condition language referenced by the Commission in CLI-00-13. *See* LBP-05-20, 62 NRC 187, 192-93 (2005); *see* CLI-00-13, 52 NRC at 27, 32. On the same day, the Board also ruled on contention Utah E/Confederated

---

[3] In this regard, the Commission directed that:

> the Board (1) require PFS to produce a sample service contract that meets all financial assurance license conditions, and (2) give Intervenors an opportunity to address the adequacy of the service contract to meet the concerns raised in Contention E. If Intervenors do not raise further objections after reviewing the sample contract, or if the Board finds [I]ntervenors' objections insubstantial, then PFS would be entitled to summary disposition on Utah Contention E. Otherwise, the contention should be set for hearing.

Id. at 35.

Tribes F itself, finding PFS had provided reasonable assurance of its financial qualifications in compliance with 10 C.F.R. § 72.22(e). *See* LBP-05-21, 62 NRC 248, 325 (2005). In accordance with LC-2, the Board stated that operations could not commence until service agreements were in place with adequate operations and maintenance (O&M), and decommissioning prices. *See id.* at 321. The total amount of the prices specified by the Board was based on costs for operating a full-capacity facility. *See id.* at 314, 321.

On June 6, 2003, PFS filed its motion requesting clarification and/or reconsideration of the Board's May 27 summary disposition determination and its contention Utah E/Confederated Tribes F partial initial decision, to which the State and the Staff responded on June 16, 2003. *See* [PFS] Motion for Clarification and/or Reconsideration of [Summary Disposition Decision and Contention Utah E Initial Decision] (June 6, 2003) [hereinafter PFS Reconsideration Motion]; [State] Response to [PFS Reconsideration Motion] (June 16, 2003) [hereinafter State Reconsideration Response]; NRC Staff's Response to [PFS Reconsideration Motion] (June 16, 2003) [hereinafter Staff Reconsideration Response]. PFS thereafter requested an opportunity to reply to the State's response to the PFS June 6 reconsideration motion, which the Board granted on June 19, 2003. *See* [PFS] Request To File a Reply to [State Reconsideration Response] to [PFS Reconsideration Motion] (June 19, 2003); Licensing Board Order (Granting Request To File Reply Pleading) (June 19, 2003) (unpublished). The PFS reply pleading was filed on June 24, 2003. *See* [PFS] Reply to [State Reconsideration Response] (June 24, 2003) [hereinafter PFS Reconsideration Reply].

II. ANALYSIS

A. Standard Governing Reconsideration Requests

Relative to the party arguments made in connection with the pending PFS reconsideration request, as we have noted elsewhere in this proceeding:

> A properly supported reconsideration motion is one that does not rely upon (1) entirely new theses or arguments, except to the extent it attempts to address a presiding officer's ruling that could not reasonably have been anticipated, *see Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-2, 45 NRC 3, 4 & n. 1 (1997) (citing cases); or (2) previously presented arguments that have been rejected, *see Nuclear Engineering Co.* (Sheffield, Illinois Low-Level Radioactive Waste Disposal Site), CLI-80-1, 11 NRC 1, 5 (1980). Instead, the movant must identify errors or deficiencies in the presiding officer's determination indicating the questioned ruling overlooked or misapprehended (1) some legal principle or decision that should have controlling effect; or (2) some critical factual information. *See Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), LBP-94-31, 40 NRC 137, 140 (1994); *Philadelphia Electric Co.* (Limerick

> Generating Station, Units 1 and 2), LBP-83-25, 17 NRC 681, 687, *rev'd and remanded on other grounds,* ALAB-726, 17 NRC 755 (1983).

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-17, 48 NRC 69, 73-74 (1998). In addition, as we have observed on another occasion:

> Although a party may not base a reconsideration motion on new information or a new thesis, *see* LBP-98-10, 47 NRC [288,] 292 [1998] (citing *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-2, 45 NRC 3, 4 (1997)), a request to reexamine existing record material that may have been misunderstood or overlooked, or to clarify a matter that the party believes is unclear, is appropriate, *see id.* at 296-97 (citing *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), LBP-83-25, 17 NRC 681, 687 (1983)).

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-99-39, 50 NRC 232, 237 (1999). It is these general precepts we are called upon to apply in this instance.

B. PFS Clarification/Reconsideration Motion

In its motion pending before the Board, PFS seeks (1) clarification of the financial license conditions applicable to PFS; and (2) reconsideration and/or clarification of (a) the need to set a specific dollar amount for O&M costs, or in the alternative, (b) the specific O&M dollar amount established by the Board in paragraph 4.79 of the contention Utah E/Confederated Tribes F partial initial decision. *See* PFS Reconsideration Motion at 1, 6. We address each of these requests below.

1. Clarification of Terms of License Conditions LC-1 and LC-2

PFS first seeks clarification that license conditions LC-1 and LC-2 be applied to PFS as they were stated by the Commission in CLI-00-13.[4] PFS claims the Board's restatement of LC-1 and LC-2 in its summary disposition determination is significant because those license conditions, as approved or revised by the Commission in CLI-00-13, 52 NRC at 27, 32, in contrast to the Board's restate-

[4] As we previously have noted, *see* LBP-05-20, 62 NRC at 193 n.1, the initial license conditions were designated by the Staff as LC17-1 and LC17-2 based on nomenclature that tied the numbering of the proposed conditions to a particular section of the Staff's December 15, 1999 Safety Evaluation Report. For ease of reference, we adopted the same numbering order as the Commission outlined in CLI-00-13 for these and other Commission-directed license conditions, albeit noting that when actually incorporated into any PFS license these conditions could well be numbered differently.

ment of LC-1 and LC-2, *see* LBP-05-20, 62 NRC at 192-93,[5] permit PFS to (1) obtain funding in the form of equity, revenue, or debt; (2) obtain such funding on a phase-by-phase basis corresponding to the stage-by-stage construction of the facility; and (3) operate a facility at less than full capacity without being required to have service agreements in place with prices adequate to fund the exact dollar amount of O&M and decommissioning costs for a full-scale, 4000-cask facility. *See* PFS Reconsideration Motion at 4-6.

While the State opposes the PFS motion for clarification and/or reconsideration in its entirety, it nonetheless proposes its own rewording of LC-1.[6] *See* State Reconsideration Response at 1, 4. For its part, the Staff supports this aspect of the PFS motion. *See* Staff Reconsideration Response at 4-5.

We grant the PFS motion to the extent that it requests clarification of these license conditions with which it must comply. In quoting the Commission's directive to the Staff to memorialize certain PFS commitments as license conditions as part of the background summary of our May 27, 2003 ruling, *see* LBP-05-20, 62 NRC at 192-93, the Board had no intention of either altering the language of LC-2, the one license condition explicitly set forth by the Commission, or altering the burden on PFS to demonstrate its financial qualifications. *See also id.* at 193 n.2 (acknowledging Commission's revision of LC-2). Thus, with respect to the construction and operation of its facility, the following license conditions, as endorsed or revised by the Commission in CLI-00-13, apply to PFS:

> LC-1. Construction of the Facility shall not commence before funding (equity, revenue, and debt) is fully committed that is adequate to construct a facility with

---

[5] Neither the Board's summary disposition decision nor its contention Utah E/Confederated Tribes F partial initial decision has been issued publicly, pending the resolution of what portions of the record may be made available to the public and what portions should be withheld as proprietary information. Following receipt of the parties' views on redaction of this reconsideration motion decision, the Board anticipates making redacted versions of both Board rulings, as well as the Board's May 27, 2002 partial initial decision regarding contention Utah S, Decommissioning, and this reconsideration determination publicly available.

[6] Specifically, the State proposes that LC-1 should be rewritten to provide:

> In accordance with LBP-03-__, Findings ¶¶ 4.53 and 4.56, PFS shall not commence construction of the facility before funding (equity, revenue, and debt) is fully committed to construct a facility with a **x x x x x x x x x x x x x x x x x x x** capacity, in the amount **x x x x x x x x x x x x.** These costs are to be escalated from fourth quarter 1999 dollars to present day value in accordance with the factors in Model Service Agreement Schedule 5.
>
> Construction of any additional capacity beyond Phase I shall commence only after funding (equity, revenue, and debt) is fully committed to construct Phase II (an additional 10,000 MTU capacity in the amount **x x x x x x x x x x x**) or Phase III (20,000 MTU in the amount of **x x x x x x x x x x x x x**). These construction costs are to be escalated as described for Phase I.

See State Reconsideration Response at 4 (footnote omitted).

the initial capacity as specified by PFS to the NRC. Construction of any additional capacity beyond this initial capacity amount shall commence only after funding is fully committed that is adequate to construct such additional capacity.

LC-2. PFS shall not proceed with the Facility's operation unless it has in place Service Agreements covering the entire term of the license, with prices sufficient to cover the operating, maintenance, and decommissioning costs of the Facility for the entire term of the license.

2. Clarification/Reconsideration of MSA Passthrough Mechanism

PFS next requests reconsideration and/or clarification of the Board's contention Utah E/Confederated Tribes F partial initial decision to reflect the passthrough mechanism established in its MSA to cover its O&M costs, which PFS argues is an appropriate method for showing adequate financial assurance pursuant to the Commission's *Monticello* decision. *See* PFS Reconsideration Motion at 6 & n.7 (citing *Northern States Power Co.* (Monticello Nuclear Generating Plant; Prairie Island Nuclear Generating Plant, Units 1 and 2; Prairie Island Independent Spent Fuel Storage Installation), CLI-00-14, 52 NRC 37 (2000)). PFS argues that because the Board's ruling requires PFS to demonstrate funding to cover a specific dollar amount of O&M costs, rather than allowing PFS to rely solely on the passthrough mechanism, the contention Utah E/Confederated Tribes F partial initial decision is inconsistent with *Monticello. See id.* at 6. Specifically, PFS proposes that the following language be substituted for the last sentence of paragraph 4.79 of the contention Utah E/Confederated Tribes F partial initial decision:

> PFS has met its financial assurance obligations with respect to O&M and decommissioning costs because of the cost pass-through nature of the MSA and the facts that PFS's customers will be subject to the Commission's Part 50 financial assurance requirements and the MSA's customer financial assurance provisions (i.e., license condition LC-4). This arrangement provides sufficient assurance of PFS's financial qualifications.

See id. at 8 (citations and footnote omitted).[7]

---

[7] This PFS suggested language would replace the following sentence in the contention Utah E/Confederated Tribes partial initial decision:

> In accordance with the Commission's instructions in CLI-00-13, the Board finds that PFS may not commence operations before service agreements for the life of the license (i.e., 20 years) are in place with prices adequate to fund operations, maintenance, and decommissioning in the amount of **x x x x x x x x x x x x x x x** (to be escalated from 1997 dollars to present-day value) plus $12 million for Tooele County host payments.

See LBP-05-21, 62 NRC at 321 (¶ 4.79).

In their respective responses to the PFS motion, both the State and the Staff oppose reconsideration of this aspect of the Board's ruling in its contention Utah E/Confederated Tribes F partial initial decision. For its part, the State contends that because the PFS suggested change to paragraph 4.79 would authorize the passthrough of **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x,** but all O&M costs, to its customers as a way of demonstrating PFS financial qualifications, the proposed language substitution constitutes a new argument that, despite having ample opportunity to do so, PFS has not yet presented in this proceeding. *See* State Reconsideration Response at 5-6. In addition to challenging the PFS reliance on *Monticello* as a basis for relieving PFS of having to demonstrate funding to cover specific O&M dollar amounts, both the State and Staff argue that the Commission in CLI-00-13 clearly directed the Board to establish specific dollar amounts for construction and O&M cost estimates. *See* State Reconsideration Response at 6-8; Staff Reconsideration Response at 6-7.

We deny the PFS request for reconsideration and/or clarification on this point. Regardless of whether *Monticello* discharges PFS of its duty to demonstrate sufficient funding to cover a specific dollar amount of O&M costs, *Monticello* clearly does not discharge the Board of its duty to heed a Commission mandate issued in the instant *Private Fuel Storage* proceeding. In CLI-00-13, the Commission directed that a condition be included in the PFS license that would prevent PFS from commencing operations before having service agreements in place with prices, ''*in the amount to be determined at hearing,*'' adequate to cover O&M and decommissioning costs. CLI-00-13, 52 NRC at 36 (emphasis added). Consequently, although we recognized in our contention Utah E/Confederated Tribes partial initial decision that the Commission's ruling in *Monticello* ''might well relieve PFS of its obligation to provide a specific estimate of the costs it intends to pass through to its customers,'' LBP-05-21, 62 NRC at 301 (¶ 4.21), we also determined, ''[i]n accordance with the Commission's instructions in CLI-00-13,'' that to satisfy LC-2, PFS could not begin operations without having service agreements in place that would cover O&M and decommissioning costs in the amount of **x x x x x x x x x x x x x x** (to be escalated from 1997 dollars to present-day value).[8] *Id.* at 321 (¶ 4.79). Because substituting the PFS proposed language for the last sentence of paragraph 4.79 would eliminate the requirement for PFS to have funding in place prior to beginning operations sufficient to cover a specific dollar amount — and, therefore, would be in direct contravention of

[8] Although we issued a separate decision regarding the adequacy of PFS decommissioning cost estimates, *see* Licensing Board Partial Initial Decision (Contention Utah S, Decommissioning) (May 27, 2003), per the table set forth in paragraph 4.58 of the contention Utah E/Confederated Tribes F partial initial decision, *see* LBP-05-21, 62 NRC at 321, we incorporated the PFS decommissioning cost estimates into the O&M costs to provide a unified figure as an aid to assessing future compliance with LC-2.

the Commission's instructions in CLI-00-13 — we decline to adopt the suggested PFS language.[9]

Seemingly acknowledging the possibility of an adverse Board ruling on its proposed language substitution, PFS alternatively requests that the Board reconsider and/or clarify its contention Utah E/Confederated Tribes F partial initial decision finding in paragraph 4.79 to require PFS to have service agreements in place sufficient to cover actual O&M and decommissioning costs for the size facility that it plans to build and operate, rather than a full-capacity, 4000-cask facility. *See* PFS Reconsideration Motion at 6, 9. In this regard, PFS argues that the Commission's decision in CLI-00-13, and LC-1 in particular, does not mandate that PFS build and operate a 4000-cask facility, but rather permits it to build either a smaller facility or a full-capacity facility in phases. *See id.* at 9. Thus, PFS submits an alternative formula for calculating its initial O&M funding requirement that would separate the variable costs of the overpacks/casks, canisters, and rail fees (calculated on a per-unit basis and divided by two to reflect each of the 20-year license terms) from the fixed O&M costs (also divided by two to reflect the two license terms), so that the amount of funding required to be covered by the customer service agreements pursuant to LC-2 would vary depending on the actual size of the facility PFS proposes to build. Additionally, the formula submitted by PFS would allow a downward adjustment of PFS variable O&M costs for any casks and canisters independently purchased by its customers as well as its Tooele County host payments for member and nonmember casks. *See id.* at 10 n.10. PFS thus requests that the Board modify finding 4.79 to reflect its proposed formula as follows:

> ''PFS may not commence [operations before service agreements for the life of the license (i.e., twenty years) are in place with prices adequate to fund operations, maintenance, and decommissioning] in the amount of **x x x x x x x x x x x x** *plus* **x x x x x x x x** *per spent fuel cask (not purchased by customers) to be stored at the facility* **x x x x x x x x x x x x x x x** (to be escalated from 1997 dollars to present day value) plus $12 million for Tooele County host payments (*adjusted for member and non-member casks*).''

Id. at 10 (footnotes omitted).

In its response opposing the PFS reconsideration motion, the State challenges this PFS alternative formula, arguing that the Board should not consider any adjustment for cask and canister costs purchased independently by PFS customers

[9] To be sure, the Commission's August 2000 CLI-00-13 directive regarding a determination relative to the amount necessary to fund O&M predates the September 2000 MSA O&M cost passthrough mechanism. Nonetheless, to the extent PFS now considers that mechanism a basis for negating the Commission's directive, this seems a matter best taken up with the Commission.

and urging that the Board reject calculating the variable O&M costs on a per-unit basis over two license terms. *See* State Reconsideration Response at 9-10. Instead, the State asserts that because the bulk of the cask and canister costs (totaling $1.911 billion for a 4000-cask facility) would be incurred by PFS during the first 20-year license term, LC-2 should be rewritten as follows:

> In accordance with LBP-03-__, Findings ¶¶ 4.58, 4.79, PFS shall not commence facility operations unless it has in place service agreements covering the entire term of the license, with prices sufficient to cover the operations, maintenance, and decommissioning costs in the amount of $1.911 billion (canisters and overpacks) plus **x x x x x x x x x x x x** (other operating and maintenance costs) plus $12 million (Tooele County host payments). All of these costs are to be escalated from fourth quarter 1997 dollars to present day value in accordance with the factors in the model service agreement, MSA Schedule 5.

Id. at 11.

For its part, the Staff supports reconsideration and/or clarification of this aspect of the Board's contention Utah E/Confederated Tribes F partial initial decision. Declaring that because the Commission allowed PFS to construct its facility in phases and was aware of the possibility that PFS would choose not to utilize its full capacity under the license, the Staff argues that PFS need only have service agreements in place adequate to cover O&M and decommissioning costs for the size facility that PFS plans to operate initially. *See* Staff Response at 8. While the Staff agrees with the general PFS proposition that the O&M cost calculation should be revised to account separately for fixed O&M costs and direct unit-dependent costs for storage casks, canisters, and rail fees, it rejects what it considers a new PFS argument for further deductions from the required demonstration of funding with respect to customers who ship their own casks and canisters and host fee payments. *See id.* at 9. The Staff also rejects the halving of direct-unit dependent O&M costs, as these costs vary with the number of casks at the facility and not with the number of years of the license. *See id.* at 9-10 & nn.13-14. In the Staff's view, the finding in paragraph 4.79 of the Board's partial initial decision should be revised to require funding of PFS's fixed and other O&M costs (for a 20-year license term), plus its per-unit costs (i.e., cask, canister, and rail fees) for the size facility to be operated initially. *See id.* at 10 n.15.

All three parties are in unanimous agreement that the Board's finding in paragraph 4.79, which calculated the requisite level of O&M funding based on the estimated operating costs of a full-capacity, 4000-cask facility over a single 20-year license term, should be reworded in some manner. As PFS and the Staff correctly note, we recognized in our contention Utah E/Confederated Tribes F partial initial decision that if granted, the PFS license would authorize, but not require, PFS to possess up to 4000 casks and that the facility, even at full

capacity, would be constructed in phases. *See, e.g.,* LBP-05-21, 62 NRC at 302, 313-14, 320-21 (¶¶ 4.23-4.25, 4.57, 4.78). Thus, consistent with LC-1, we agree in principle that PFS need not demonstrate that it has sufficient funding to cover all of the costs associated with operating a 4000-cask facility up front, if it indeed decides to build the facility in phases or decides to build a less than full-capacity facility. We therefore find it appropriate to consider the fixed and other O&M costs (totaling **x x x x x x x x x x x x** over a 20-year license term)[10] separately from the cask, canister, and transportation costs that will vary depending on the initial size of the facility. Accordingly, we calculate the cost (including cask, canister, and transportation costs) of each unit to be **x x x x x x x x.**[11] However, because the record before us is replete with references to PFS constructing a minimum initial capacity facility of **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x** relative to LC-1,[12] we find it appropriate to require PFS to have service agreements in place with prices to cover the O&M costs of, at a minimum, a **x x x x x x x x x x x** facility. If PFS elects to specify a minimum initial capacity other than **x x x x x x x x x x** as part of its demonstration of compliance with LC-1, the requisite level of funding may be adjusted to reflect the actual initial size of the facility.[13]

---

[10] We derive this figure from the O&M cost estimates provided by PFS, which estimated the costs of a 4000-cask facility over the anticipated 40-year lifetime of the facility minus the canister costs ($1,302,200,000), the overpack costs ($608,800,000), and the rail fees (**x x x x x x x x x x x x**). *See* LBP-05-21, 62 NRC at 314 (¶ 4.58).

[11] We likewise derive this figure from the O&M cost estimates provided by PFS, i.e., canister costs of $1,302,200,000 plus overpack costs of $608,800,000 plus rail fees of **x x x x x x x x x x x x**/4000 casks. *See id.* at 314 (¶ 4.58). We have elected not to divide this figure in half as PFS would have it because, as the Staff points out, *see* Staff Reconsideration Response at 10, the per-unit costs vary with the number of casks used at the facility and not with the number of years of the license.

[12] *See, e.g.,* Testimony of John Parkyn on [PFS Facility] Construction Costs — Contention Utah E/Confederated Tribes F (fol. Tr. at 1845) at 4; Tr. at 2026, 2027; [PFS] Proposed Findings of Fact and Conclusions of Law on Contentions Utah E/Confederated Tribes F and Utah S (July 31, 2000) at 20 (**x x x x x x x x x x** minimum planned initial storage capacity).

[13] In this regard, we note that in the proceeding concurrently before the Licensing Board chaired by Administrative Judge Farrar involving contention Utah K, Credible Accidents, PFS filed a motion requesting reconsideration of LBP-03-4, 57 NRC 69 (2003). In that motion, PFS argued that the Farrar Board should have ruled that the license could be issued subject to a condition limiting the size of the facility such that the aircraft crash hazard would remain below the Commission's safety criterion (i.e., limiting the size to a 336-cask facility). During the oral argument on the motion, PFS indicated that its intention was to begin constructing a 336-cask facility as an interim step to continuing to pursue a license for a full-size, 4000-cask facility. *See* Tr. at 13,757. The PFS motion was denied by the Board on procedural grounds without prejudice to PFS seeking such a sizing limitation through appropriate means. *See id.* at 13,857, 13,861; *see also* LBP-03-30, 58 NRC 454, 459 n.1 (2003). Since the Farrar Board's May 2003 ruling on that reconsideration motion, PFS has not further pursued limiting the size of the facility to 336 (or any other number of) casks through a license application amendment or any other appropriate means.

Thus, we grant the pending PFS motion to the extent it requests reconsideration and/or clarification of the dollar amount specified in paragraph 4.79. We hereby revise paragraph 4.79 of our contention Utah E/Confederated Tribes F partial initial decision in its entirety to read as follows:[14]

> In conclusion, we find that in accordance with 10 C.F.R. § 72.22(e)(2), PFS has reasonably estimated the costs of operation and maintenance over the 40-year planned life of the facility, with the exception of a $24 million Tooele County, Utah host payment understatement. In accordance with the Commission's instructions in CLI-00-13, the Board finds that PFS may not commence operations before service agreements for the life of the license (i.e., 20 years) are in place with prices adequate to fund operations, maintenance, and decommissioning[21] for an initial **x x x x x x x x x** capacity facility in the amount of **x x x x x x x x x x x x x.** This figure reflects **x x x x x x x x x x x x x** for cask, canister, and rail costs (**x x x x x x x x** per unit **x x x x x x x x x x x x**), plus **x x x x x x x x x x x x x** for fixed and other O&M costs over a 20-year license term, plus $12 million for Tooele County host payments. All costs are to be escalated from 1997 dollars to present value. Should the initial capacity of the facility as appropriately specified by PFS differ from **x x x x x x x x x x,** the above amount may be adjusted according to the actual number of casks to be used.

[21] Although we issue a separate decision today regarding the adequacy of the PFS efforts regarding decommissioning cost estimates, *see* Partial Initial Decision of May 27, 2003, LBP-05-22, 62 NRC 328, 360-68 (2005), per the table in section IV.F.1 above, we incorporate the PFS decommissioning costs estimates in this figure to provide a unified figure as an aid to assessing future compliance with LC-2.

III. CONCLUSION

Finding sufficient justification to warrant (1) clarification of license conditions LC-1 and LC-2 applicable to PFS so as to adopt the wording as endorsed or reworded by the Commission in CLI-00-13; and (2) reconsideration of the O&M dollar amount specified in paragraph 4.79 of our May 27, 2003 partial initial decision regarding contention Utah E/Confederated Tribes F, we grant the pending PFS reconsideration/clarification motion in those respects. Further, because we find that not establishing a specific dollar amount that the PFS service agreements must cover would be inconsistent with the Commission directive in CLI-00-13, 52 NRC at 36, we deny the PFS motion in that regard.

[14] Because the PFS request for further adjustment of the Tooele County host payment to reflect member and nonmember casks constitutes a new argument not previously presented to the Board, we decline to permit any deduction from the $12 million figure.

For the foregoing reasons, it is this fifth day of January 2004, ORDERED, that:

1. The June 6, 2003 PFS motion for reconsideration/clarification of the Board's May 27, 2003 summary disposition ruling, LBP-05-20, 62 NRC 187 (2005), and its partial initial decision that same date regarding contention Utah E/Confederated Tribes F, LBP-05-21, 62 NRC 248 (2005), is *granted in part and denied in part* in accordance with the Board determinations set forth in section II.B of this Memorandum and Order.

2. Given previous party positions suggesting that financial assurance-related information may include proprietary or other sensitive data, on or before *Tuesday, January 20, 2004,* the State, PFS, and the Staff shall provide the Board with a joint filing outlining each (1) proposed redaction of any part of this Memorandum and Order to which there is no objection; and (2) proposed redaction of any part of this Memorandum and Order to which there is an objection. The particular word or phrase to be withheld from public release shall be specified for each proposed redaction; blanket requests for withholding are disfavored. Further, in accordance with 10 C.F.R. § 2.790, the party seeking the proposed redaction shall at the same time provide a separate submission that describes with specificity (as supported by any necessary affidavits) the reasons for withholding each proposed

redaction. Responses by any party objecting to a proposed redaction shall be filed on or before *Friday, January 30, 2004.*

THE ATOMIC SAFETY AND
LICENSING BOARD[15]

G. Paul Bollwerk, III, Chairman
ADMINISTRATIVE JUDGE

Jerry R. Kline
ADMINISTRATIVE JUDGE

Peter S. Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland
January 5, 2004

[15] Pursuant to previous Board issuances on e-mail service of documents identified as potentially containing proprietary information, copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for PFS, the State, and the Staff. In addition, this date a memorandum was sent by e-mail to all the parties to this proceeding advising them of the issuance of this decision and the Board's determination to afford this decision confidential treatment pending a response by PFS, the State, and the Staff to the Board's inquiry under ordering paragraph 2, above. *See* Licensing Board Memorandum and Order (Notice Regarding Issuance Concerning Reconsideration/Clarification Motion) Contentions Utah E/Confederated Tribes F and Contention Utah S) (January 5, 2004) (unpublished).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

J. E. Dyer, Director

In the Matter of **Docket No. 50-271**
(License No. DPR-28)

ENTERGY NUCLEAR VERMONT YANKEE, LLC, and ENTERGY NUCLEAR OPERATIONS, INC.
(Vermont Yankee Nuclear Power Station)

August 16, 2005

The Petitioners requested that the Nuclear Regulatory Commission (NRC) issue a Demand for Information requiring Entergy Nuclear Operations, Inc., the operator of Vermont Yankee, to provide information that clearly and unambiguously describes how the plant complies with the General Design Criteria (GDC) specified in 10 C.F.R. Part 50, Appendix A, or the draft GDC published by the Atomic Energy Commission in 1967. The Petitioners stated that this information is essential for two NRC regulatory activities at Vermont Yankee: (1) the NRC's review of Entergy's application for an extended power uprate (EPU), and (2) an NRC Engineering Team Inspection at Vermont Yankee.

The final Director's Decision on this petition was issued on August 16, 2005. That decision addresses several issues related to the Vermont Yankee design and licensing basis including: (1) whether the designation of Appendix F of the Updated Final Safety Analysis Report (UFSAR) as ''historical information'' meets the intent of 10 C.F.R. § 50.71(e) regarding maintenance of design basis information and (2) whether a compilation of Vermont Yankee's current design conformance to the draft GDC is necessary for licensing reviews and inspections.

With respect to the first issue, the NRC Staff concluded that the designation of UFSAR Appendix F as historical information is consistent with the applicable industry guidance, and would meet the intent of 10 C.F.R. § 50.71(e) regarding maintenance of design basis information, if the relevant information, consistent

with the definition of ''design bases'' in 10 C.F.R. § 50.2, is contained in other portions of the UFSAR that are not designated as historical. Entergy has committed to provide cross references in the next update of the UFSAR showing the applicable GDC and the various sections of the UFSAR that demonstrate conformance with those GDC. Following Entergy's next update of the UFSAR, the NRC Staff will evaluate if any enforcement action is warranted.

With respect to the second issue, the NRC Staff concluded that the NRC licensing review process provides reasonable assurance that the plant continues to meet the intent of the draft GDC and adequate protection of public health and safety is assured. The NRC also concluded that it did not need a compilation of Vermont Yankee's current conformance to the draft GDC to review the application for an EPU or to conduct the Engineering Team Inspection (inspection was completed in September 2004). Consequently, the NRC denied the request to issue a Demand for Information to the Licensee.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

I. INTRODUCTION

By letter dated July 29, 2004, as supplemented on December 8, 2004, Mr. Paul Blanch and Mr. Arnold Gundersen (the Petitioners) filed a petition pursuant to Title 10 of the *Code of Federal Regulations* (10 C.F.R.), section 2.206. The Petitioners requested that the U.S. Nuclear Regulatory Commission (NRC) issue a Demand for Information requiring Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (Entergy or the Licensee) to provide information that clearly and unambiguously describes how Vermont Yankee Nuclear Power Station (Vermont Yankee) complies with the General Design Criteria (GDC) specified in 10 C.F.R. Part 50, Appendix A, or the draft GDC published by the Atomic Energy Commission (AEC) in 1967. As the basis for their request, the Petitioners stated that this information is essential for two NRC regulatory activities at Vermont Yankee: (1) the NRC's review of Entergy's application for an extended power uprate (EPU), and (2) the NRC's engineering assessment. The Petitioners stated that until the design bases are clearly identified, any inspection or assessment is meaningless.

In a letter dated August 20, 2004, to the Petitioners, the NRC stated that the Staff would not treat this request under the 10 C.F.R. § 2.206 process because the issues could be addressed through the ongoing licensing proceeding related to the application for an EPU. The period during which a hearing could be requested closed on August 30, 2004. The Staff noted that, in accordance with 10 C.F.R. § 2.1205(*l*)(2), if a petition to intervene and request for a hearing in a licensing

proceeding does not satisfy the legal requirements for a hearing or intervention, the Atomic Safety and Licensing Board Panel (ASLBP) or the Presiding Officer may refer the request to the 10 C.F.R. § 2.206 process, in which case, the NRC may accept it for review under 10 C.F.R. § 2.206. In response to the Petitioners' request for immediate action due to the imminent performance of the Engineering Team Inspection in August 2004, the letter stated that other methods are available to the inspectors to obtain design basis information, rendering a Demand for Information unnecessary for the purposes of the inspection.

By teleconference on August 26, 2004, the Petitioners discussed the petition with the NRC's Petition Review Board (PRB). This teleconference was transcribed and the transcript is publicly available as a supplement to the petition. The transcript is available for inspection at the Commission's Public Document Room (PDR), at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland, or electronically in the Agencywide Documents Access and Management System (ADAMS) (Accession number ML042870477). Publicly available records will be accessible from the ADAMS Public Electronic Reading Room on the NRC Web site at *http://www.nrc.gov/reading-rm/adams.html.* Persons who do not have access to ADAMS or who have problems in accessing the documents in ADAMS should contact the NRC PDR reference staff by telephone at 1-800-397-4209 or 301-415-4737 or by e-mail to *pdr@nrc.gov*.

On August 30, 2004, the New England Coalition filed a request for a hearing related to the proposed Vermont Yankee EPU. Among the contentions submitted was a contention that the Licensee had failed to maintain adequate documentation to determine design basis conformance. This contention, for which Mr. Blanch provided a supporting statement, was similar to the concern raised in the Petitioners' 10 C.F.R. § 2.206 petition. By order dated November 22, 2004, the ASLBP declined to admit this contention for hearing. The Staff subsequently decided to accept the petition for review pursuant to 10 C.F.R. § 2.206, as discussed in a letter to the Petitioners dated January 17, 2005.

On December 8, 2004, the Petitioners supplemented their petition to request that the NRC demonstrate that Vermont Yankee is in compliance with its GDC and other applicable regulations. The Petitioners also expressed their concerns with the process used to conduct the engineering inspection at Vermont Yankee, and repeated the requests for enforcement action discussed in their original petition.

By letter dated May 13, 2005, the NRC Staff requested Entergy to provide information related to the petition. Entergy responded by letter dated June 14, 2005, and the information provided was considered by the Staff in its evaluation of the petition.

The NRC Staff sent a copy of the proposed Director's Decision to the Petitioners and to the Licensee for comment by letters dated May 17, 2005. The Staff did not receive any comments on the proposed Director's Decision.

II. DISCUSSION

As discussed in section I, the Petitioners requested that the NRC issue a Demand for Information requiring the Licensee to provide information that clearly and unambiguously describes how Vermont Yankee complies with the GDC specified in 10 C.F.R. Part 50, Appendix A, or the draft GDC published by the AEC in 1967. The specific concerns raised by the Petitioners which are used as the basis for their request are discussed in the following paragraphs.

A. Concern 1 — Conformance with 10 C.F.R. § 50.71(e)

1. Petitioners' Concern

The Petitioners stated in their July 29, 2004, letter that Appendix F to the updated final safety analysis report (UFSAR) is neither meaningful nor useful due to the marking of the appendix as ''historical,'' and the summary in the appendix which states that ''the applicability of the historic design criteria conformance statements to the current facility design has not been evaluated and as such should not be considered current design configuration.''

2. Staff's Response

a. Background

The original Appendix F to the UFSAR documented how Vermont Yankee conformed to the proposed GDC published by the AEC in July of 1967. Vermont Yankee was issued a construction permit in December 1967. In 1971 the AEC published the final version of the GDC as Appendix A to 10 C.F.R. Part 50. In approving the final GDC, the Commission stated that they were not new requirements, but were promulgated to more clearly articulate the licensing requirements and the practices in effect at that time. In 1982 the Licensee for Vermont Yankee notified the NRC of a revision to Appendix F. The purpose of the 1982 revision of Appendix F to the UFSAR was to document how the design of Vermont Yankee met the intent of the final GDC, because NRC guidance was not clear at the time regarding the treatment of plants with construction permits granted prior to issuance of the final GDC. In a letter dated September 28, 1999, the Licensee clarified that Vermont Yankee was explicitly licensed to the requirements of the draft GDC. This letter was prompted by a Commission decision in 1992 that the Staff would not apply the final GDC to plants with construction permits issued prior to May 21, 1971. With the clarification by the Commission that pre-GDC plants, such as Vermont Yankee, do not need exemptions to the final GDC, the Licensee notified the NRC that it intended

to reinstate the original version of Appendix F in the final safety analysis report (FSAR). The September 28, 1999, letter did not indicate that Vermont Yankee intended to mark this appendix as historical. The NRC's November 12, 1999, response to the Licensee's September 28, 1999, letter stated that, because the Licensee did not indicate that the proposed change involved a Technical Specification (TS) change or an unreviewed safety question, the Staff did not intend to review Vermont Yankee's position regarding reinstatement of the original Appendix F. However, the letter stressed that the NRC's decision not to review did not indicate agreement or disagreement with the Licensee's position. By letter dated November 2, 2001, the Licensee submitted Revision 17 to the UFSAR, including a revised Appendix F with a footnote marking the appendix as ''historical.''

b. Applicable Regulations

Section 50.71(e) of 10 C.F.R. requires operators of nuclear power plants to ''update periodically . . . the final safety analysis report originally submitted as part of the application for the operating license, to assure that the information included in the report contains the latest information developed.'' Regulatory Guide (RG) 1.181, ''Content of the Updated Final Safety Analysis Report in Accordance with 10 CFR 50.71(e)'' was written in response to a recognition that additional guidance regarding compliance with 10 C.F.R. § 50.71(e) was necessary. As stated in RG 1.181, ''The objectives of 10 CFR 50.71(e) are to ensure that licensees maintain the information in the UFSAR to reflect the current status of the facility and address new issues as they arise, so that the UFSAR can be used as a reference document in safety analyses.'' RG 1.181 endorses the methods described in Nuclear Energy Institute (NEI) report, NEI 98-03, ''Guidelines for Updating Final Safety Analysis Reports,'' dated June 1999, as acceptable for complying with the provisions of 10 C.F.R. § 50.71(e).

NEI 98-03 provides the following definition of historical information:

> Historical information is that which was provided in the original FSAR to meet the requirements of 10 CFR 50.34(b) and meets one or more of the following criteria:
>
> - information that was accurate at the time the plant was originally licensed, but is not intended or expected to be updated for the life of the plant
> - information that is not affected by changes to the plant or its operation
> - information that does not change with time.

NEI 98-03 explicitly states that the plant's design bases should not be designated as historical because ''the original design bases continue to be part of

the overall design bases for the facility, and new information may warrant their update.''

Section 50.34(b) of 10 C.F.R., ''Final safety analysis report,'' states, in part, that, ''The final safety analysis report shall include information that describes the facility, presents the *design bases* and the limits on its operation, and presents a safety analysis of the structures, systems, and components and of the facility as a whole . . .'' (emphasis added).

Section 50.2 of 10 C.F.R., ''Definitions,'' states, in part, that, ''*Design bases* means the information which identifies the specific functions to be performed by a structure, system, or component of a facility, and the specific values or ranges of values chosen for controlling parameters as reference bounds for design.''

c. Staff Evaluation

The Staff recognizes that NEI 98-03 is not a regulatory requirement and the NRC may determine the acceptability of other methods to meet 10 C.F.R. § 50.71(e) on a case-by-case basis. However, Entergy specifically stated that it used the guidance in NEI 98-03 in its determination that Appendix F could be made historical and believed that it fully complied with the industry guidelines (see Entergy's Answer to the New England Coalition's Request for a Hearing, dated September 29, 2004, ADAMS Accession No. ML042820090). By marking UFSAR Appendix F as historical, the Licensee made the decision not to maintain the information as current. In order to determine, in this case, if the Licensee met the intent of 10 C.F.R. § 50.71(e), the NRC Staff, in a letter dated May 13, 2005, requested that Entergy provide the following information:

1. Explain how the designation of Appendix F as historical meets the guidance contained in NEI 98-03 and meets the intent of 10 C.F.R. § 50.71(e) regarding maintenance of design basis information.

2. If a determination is made that the historical designation for Appendix F is not consistent with the regulations, provide a plan and schedule for revising the UFSAR to include current information on the overall design and licensing bases for the facility.

The Licensee provided its response in a letter dated June 14, 2005. The response to the first question stated, in part, that:

- UFSAR Appendix F was a one-time comparison, performed at the time of original licensing, to demonstrate conformance with the draft GDC. Appendix F contains a discussion of design criteria to which Vermont Yankee's original design conformed, and is thus properly designated as ''historical information'' consistent with the definition in NEI 98-03. Therefore, the designation of Appendix F as historical information meets

the intent of 10 C.F.R. § 50.71(e) regarding maintenance of design bases information.

- Vermont Yankee, in a letter dated February 14, 1997, provided its response to an NRC request for information, pursuant to 10 C.F.R. § 50.54(f), regarding the adequacy of design basis information. That letter included a commitment to perform a verification of the UFSAR. The Licensee stated that the UFSAR verification effort is complete and included both an accuracy and completeness verification. The effort used the guidance in NEI 98-03 and verified that the applicable design bases requirements were included within the controlled portion of the UFSAR.

The licensee's response to the second question stated, in part, that:

- Entergy's review confirmed that there are no regulatory requirements that would require a summary of the conformance to the draft GDCs to be included in the UFSAR. However, the Licensee believes that it would be beneficial for their staff to have cross references from the draft GDCs to the various sections of the UFSAR that contain information demonstrating conformance with the applicable draft GDC and the final GDC contained in Appendix A to 10 C.F.R. Part 50 that may have been invoked in the licensing basis.
- The Licensee committed to provide this information in the next UFSAR update, which will be submitted, in accordance with 10 C.F.R. § 50.71(e), within 6 months after completion of the next refueling outage.

The NRC Staff agrees with the Licensee's statement that there are no regulatory requirements that would require a summary of the conformance to the draft GDCs to be included in the UFSAR. The Staff concludes that the designation of UFSAR Appendix F as historical information is consistent with the guidance in NEI 98-03, and would meet the intent of 10 C.F.R. § 50.71(e) regarding maintenance of design basis information, if the relevant information, consistent with the definition of ''design bases'' in 10 C.F.R. § 50.2, is contained in other portions of the UFSAR that are updated to reflect current plant design. Following the Licensee's next update of the UFSAR to add the cross references mentioned above, the NRC Staff will evaluate if any enforcement action is warranted.

B. Concern 2 — Conformance to Draft GDC

1. Petitioners' Concern

The Petitioners assert that the Licensee, or the NRC, must be able to demonstrate how Vermont Yankee conforms with, or deviates from, each of the draft GDC. Absent a documented comparison of Vermont Yankee's design against the

draft GDC, the Petitioners claim that the NRC cannot conclude that the plant is in conformance with regulations and, therefore, there is no assurance of adequate protection to the general public.

2. Staff's Response

The GDC are referenced in 10 C.F.R. § 50.34(a), which specifies information to be submitted for a construction permit. The NRC evaluated each plant against the draft GDC or final GDC as applicable during initial licensing. A prerequisite to the issuance of the operating license was the finding that the facility will operate in conformity with the rules and regulations of the Commission and will not endanger the health and safety of the public. The safety review process, by which changes to a plant and its operating procedures subsequent to initial licensing are evaluated per the criteria of 10 C.F.R. § 50.59, provides an adequate basis for concluding that the plant continues to meet the licensing bases. This philosophy was established when the Commission decided not to apply Appendix A (the final GDC) to plants with construction permits issued prior to May 21, 1971. In a Staff Requirements Memorandum dated September 18, 1992, the Commission approved the option of not applying the final GDC to these plants and not requiring such plants to seek exemptions from the GDC. The Commission noted that the regulatory standard for such plants is plant-specific and is documented in the license, the licensing safety evaluation report, and the FSAR. As stated in SECY-92-223, ''Existing regulatory processes are sufficiently broad and rigorous to ensure that plants continue to be safe and to comply with the intent of the GDC.''

Consistent with this direction, whenever a change to the licensing or design basis is requested for Vermont Yankee, the NRC review process ensures that changes are reviewed against the relevant design and licensing bases to provide reasonable assurance that the plant continues to meet the intent of the draft GDC. In this way, the NRC maintains assurance that the public is adequately protected.

The NRC has not compiled, and does not require the Licensee to compile, a complete list of a plant's current conformance to the draft GDC. The design and licensing bases for any plant reside in many documents. These documents are either submitted to the NRC as part of the formal docket or are available at the plant for review by NRC inspectors.

C. Concern 3 — Implications for NRC Reviews and Inspections

1. Petitioners' Concern

The Petitioners claim that, absent a compilation of the Licensee's conformance to the draft GDC, it is impossible for the NRC's pending engineering assessment

and its ongoing review of Entergy's EPU application to ascertain critical safety and reliability issues. The Petitioners state that any inspection or assessment is totally meaningless until the design bases are clearly identified.

2. Staff's Response

The NRC Office of Nuclear Reactor Regulation Office Instruction LIC-100, ''Guideline for Managing the Licensing Bases for Operating Reactors,'' provides a description of the various attributes of the elements of the licensing bases for operating reactors. The guideline states that ''although the GDC may be viewed as legally binding on licensees (in the absence of an approved alternative design bases), issues associated with licensing, inspection or enforcement are usually tied to more explicit NRC requirements (technical specifications or specific regulations).'' Therefore, a compilation of a plant's compliance with the GDC or draft GDC is not necessary for the Staff to perform licensing reviews or inspections. However, the Staff must be able to determine the design basis of a plant in order to perform these reviews and inspections. That design basis information may be obtained through several sources, including the UFSAR, license, orders, calculations, etc. The Staff may obtain this information onsite, in docketed information, or through requests for information to the Licensee.

The Staff's review of the EPU application is based on NRC Review Standard RS-001, ''Review Standard for Extended Power Uprates.'' RS-001 contains guidance for evaluating each area of review in the application, including the specific GDC used as the NRC's acceptance criteria. To aid the Staff in its review, the Licensee submitted supplements to its EPU application dated October 1 and October 28, 2003. The supplements provided a matrix cross-referencing the design criteria in the Vermont Yankee licensing basis to the final GDC. In a supplement to its application dated January 31, 2004, Entergy provided a revision to the template safety evaluation in RS-001 replacing the numeric values of the GDC with the corresponding Vermont Yankee design criteria and draft GDC that constitute Vermont Yankee's current licensing basis. Related changes to Vermont Yankee-specific design criteria were also incorporated in the revised template. The revision provided by the Licensee aids the Staff's review of the EPU application using the current licensing basis, including information on the conformance of the proposed EPU to the draft GDC.

Therefore, the NRC does not believe that the information requested by the Petitioners is necessary for the Staff to perform a thorough and meaningful evaluation of the EPU application or an effective Engineering Team Inspection.

D. Concern 4 — Accuracy of Appendix F

1. Petitioners' Concern

The summary description in section F.1 of the UFSAR states that the historic design criteria conformance statements should not be considered current design configuration and that ''information regarding application of the General Design Criteria can be found elsewhere in the UFSAR and in other design and licensing basis documents.'' The Petitioners in their July 29, 2004, letter and in the transcript of the PRB meeting on August 26, 2004, state that the reference to ''elsewhere in the UFSAR'' is an unsupported and inaccurate statement as the GDC are not discussed in the UFSAR other than in Appendix F.

2. Staff's Response

The text cited by the Petitioners as the basis for the concern is in the last sentence in the following paragraph from UFSAR Appendix F:

> Vermont Yankee has made changes to the facility over the life of the plant that may have invoked the final General Design Criteria as design criteria. Such invocation was not intended to constitute a regulatory commitment, unless specifically docketed as such. Information regarding application of the General Design Criteria can be found elsewhere in the UFSAR and in other design and licensing basis documents.

The Staff has determined that, taken in context, the sentence quoted by the Petitioners pertains to the final GDC (i.e., 10 C.F.R. Part 50, Appendix A), not the draft GDC. The Staff did an electronic search of the entire UFSAR and found that UFSAR sections 7.16.4 and 10.20.4 discuss Vermont Yankee's invocation of final GDCs 12 and 19, respectively. In addition, an electronic search of the Vermont Yankee TSs found that final GDCs 60 and 64 are invoked as part of the bases for TS 3.8.K.

The Staff also reviewed a Vermont Yankee internal document, ''Design Basis Document [DBD] for Service Water Systems,'' which was submitted to the NRC as part of the EPU hearing process. Section 2.2 of the DBD contains the regulatory requirements applicable to the systems and discusses conformance to applicable draft GDC as well as several of the final GDC. The Staff found information elsewhere in the UFSAR and other design basis documents (e.g., the DBD) and licensing basis documents (e.g., TSs) regarding application of the final GDC consistent with the information in the UFSAR Appendix F paragraph quoted above.

The Staff determined that the sentence quoted by the Petitioners is intended to convey that although the design and licensing basis for Vermont Yankee is the draft GDC, there is information elsewhere in the UFSAR and other design

and licensing basis documents that may have invoked the final GDC. The Staff concludes that the summary description in section F.1 of the UFSAR is accurate.

E. Concern 5 — Conduct of Engineering Inspection

1. Petitioners' Concern

In their December 8, 2004, letter, the Petitioners express concerns with the conduct of the Engineering Team Inspection. In particular, the Petitioners stated that the condition of Vermont Yankee was reviewed against design drawings and specifications, operating procedures, calculations, Information Notices, Generic Letters, and RGs, and was not reviewed for compliance with NRC regulations, including the GDC. The Petitioners claim that the UFSAR does not reflect the design bases of the plant and, therefore, the use of the UFSAR as the basis for the inspection is inadequate.

In addition, the Petitioners state that the fact that the engineering inspection identified areas of noncompliance supports their contention that the plant is not in compliance with NRC regulations and, therefore, adequate protection of public health and safety is not assured.

2. Staff's Response

The Commission's regulations in 10 C.F.R. Parts 50 and 100 embody a collection of broad safety principles in addition to a collection of specific safety requirements. Some guidance was needed to augment the broad safety principles in the regulations in order to apply them to the specific design and operation of individual operating licenses. The GDC established criteria for developing the design and performance requirements. These requirements were formalized in regulations and acceptable ways to implement them are described in guidance documents such as Standard Review Plans, RGs, and Branch Technical Positions. Inspectors apply their knowledge of these NRC requirements and guidance documents during inspections.

Regarding the concern about inspection findings, the NRC Staff does not agree with the Petitioners' conclusion that findings of noncompliance during an inspection imply that adequate protection of public health and safety is not assured. The NRC regards compliance with regulations, license conditions, and technical specifications as mandatory. However, the NRC also recognizes that plants will not operate trouble-free. This is clearly articulated in Criterion XVI of Appendix B to 10 C.F.R. Part 50, ''Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants.'' Criterion XVI states that ''[m]easures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, and defective material and equipment, and

nonconformances are promptly identified and corrected.'' The NRC's approach to protecting public health and safety is based on the philosophy of defense-in-depth. Briefly stated, this philosophy (1) requires the application of conservative codes and standards, which create substantial safety margins in the design of nuclear plants; (2) requires high quality in the design, construction, and operation of nuclear plants to reduce the likelihood of malfunctions, including the use of automatic safety system actuation features; (3) recognizes that equipment can fail and operators can make mistakes, thus requiring redundancy in safety systems and components to reduce the chances that malfunctions or mistakes will lead to accidents that release fission products from the fuel; and (4) recognizes that, in spite of these precautions, unforseen events that could result in serious fuel damage accidents may happen, thus requiring containment structures and other safety features to mitigate the release of fission products offsite. Additionally, emergency planning is considered another layer of defense-in-depth. While compliance with the NRC's regulations, as a general matter, provides reasonable assurance that public health and safety will be adequately protected, noncompliance does not necessarily mean that public health and safety is not adequately protected. The NRC must exercise its judgment regarding thresholds for determining the safety of plant operation. Many inspections conducted by the NRC result in findings of noncompliance. NRC's Inspection Manual Chapter 0305 provides an overview of the assessment program for operating reactors. Inspection Manual Chapter 0609 describes the significance determination process used to determine the safety significance of inspection findings. The safety significance is used to guide the NRC's actions taken in response to inspection findings. For the large majority of violations the noncompliance is not significant from a risk perspective and does not pose an undue risk to the public health and safety.

III. CONCLUSION

The NRC Staff has reviewed the basis for the Petitioners' requested actions. The Staff has concluded that the designation of UFSAR Appendix F as historical information is consistent with the guidance in NEI 98-03, and would meet the intent of 10 C.F.R. § 50.71(e) regarding maintenance of design basis information, if the relevant information, consistent with the definition of ''design bases'' in 10 C.F.R. § 50.2, is contained in other portions of the UFSAR that are updated to reflect current plant design. Following the Licensee's next update of the UFSAR to add the cross references mentioned in section II.A of this Director's Decision, the NRC Staff will evaluate if any enforcement action is warranted.

Based on the reasons discussed in section II of this Director's Decision, the NRC has concluded that the NRC licensing review process provides reasonable assurance that the plant continues to meet the intent of the draft GDC and adequate

protection of public health and safety is assured. The NRC also concludes that it did not need a compilation of the Vermont Yankee's current conformance to the draft GDC to review the application for an EPU or to conduct the Engineering Team Inspection (inspection was completed in September 2004). Consequently, the NRC denies the request to issue a demand for information to the Licensee.

As provided in 10 C.F.R. § 2.206(c), a copy of this Director's Decision will be filed with the Secretary of the Commission for the Commission to review. As provided for by this regulation, the Decision will constitute the final action of the Commission 25 days after the date of the Decision unless the Commission, on its own motion, institutes a review of the Decision within that time.

FOR THE NUCLEAR REGULATORY COMMISSION

R. William Borchardt, Acting Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 16th day of August 2005.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nils J. Diaz, Chairman
Jeffrey S. Merrifield
Gregory B. Jaczko
Peter B. Lyons

In the Matter of **Docket No. 72-22-ISFSI**

PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage Installation) **September 9, 2005**

RULES OF PRACTICE: RECONSIDERATION PETITIONS

An Intervenor's 2005 challenge to a ruling in a 2002 Commission Legal Issuance amounted to an untimely motion for reconsideration. *See* 10 C.F.R. § 2.786(e) (2004) (setting forth a 10-day deadline for filing a petition for reconsideration of a Commission decision). Lateness alone is sufficient to reject Utah's reconsideration request. *See, e.g., Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-00-14, 51 NRC 301, 310-11 (2000) (late-filed motion for reconsideration requires good cause, as well as new information or changed circumstances).

RULES OF PRACTICE: RECONSIDERATION PETITIONS

Reconsideration motions must be based on ''elaboration or refinement of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification.'' *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-02-1, 55 NRC 1, 2 (2002).

RULES OF PRACTICE: STANDARD OF REVIEW (CLEAR ERROR)

Our ''standard of 'clear error' for overturning a Board factual finding is quite high.'' *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-03-8, 58 NRC 11 (2003). ''A 'clearly erroneous' finding is one that is not even plausible in light of the record viewed in its entirety.'' *Tennessee Valley Authority* (Watts Bar Nuclear Plant, Unit 1; Sequoyah Nuclear Plant, Units 1 and 2; Browns Ferry Nuclear Plant, Units 1, 2, and 3), CLI-04-24, 60 NRC 160, 189 (2004) (internal citations and quotation marks omitted).

RULES OF PRACTICE: STANDARD OF REVIEW (CLEAR ERROR)

The likelihood that a reviewing body will rely on the presumption of correctness of a trial court's factual determinations ''tends to increase when trial judges have lived with the controversy for weeks or months instead of just a few hours.'' *Bose Corp. v. Consumers Union of the United States, Inc.*, 466 U.S. 485, 500 (1984).

RULES OF PRACTICE: STANDARD OF REVIEW (CLEAR ERROR)

Given undisputed evidence that cruise missiles would not be tested within 10 nautical miles of the proposed facility, and undisputed evidence that, according to Air Force officials, no cruise missile has crashed more than 1 mile off its flight path, it was reasonable for the Board to conclude that there was no material factual dispute suggesting that cruise missiles present any statistically significant threat to the facility.

RULES OF PRACTICE: STANDARD OF REVIEW (PREJUDICIAL PROCEDURAL ERROR)

There was no obvious abuse of discretion, or procedural error, in the Board's refusal to grant a new hearing concerning Intervenor's untimely claim that an aircraft crash into a cask might cause excessive radiation doses to the public through loss of shielding, even if the interior canister is not breached.

RULES OF PRACTICE: STANDARD OF REVIEW (CLEAR ERROR)

There was no clear error of fact or other basis for Commission review of the Board's decision to use experimental data to calculate how the stainless steel multipurpose storage canister would hold up in an aircraft crash, or its decision to reject a DOE Standard formulated for dissimilar situations. The Board explained in detail its reasoning in rejecting the DOE Standard, both in its original ruling and on reconsideration, and its reasoning rested on the evidence before it.

RULES OF PRACTICE: STANDARD OF REVIEW (CLEAR ERROR)

There was no basis for the Commission to reevaluate the Board's decision to include particular crashes in the data analyzed to calculate the relative probabilities of crashes occurring at certain speeds and angles on the site of the proposed facility. The Board's inclusion of the seven disputed engine failure accidents does not appear to us ''clearly erroneous'' — that is, not even ''plausible'' on the record. Even assuming that Utah is correct that eliminating these crashes from the data set would shift the probability distribution toward higher speeds, it is not clear that the result would be a more accurate prediction of future Skull Valley accidents.

RULES OF PRACTICE: STANDARD OF REVIEW (CLEAR ERROR)

The Board's calculations concerning treatment of impacts to the top of a cask from a crashing F-16 were not ''clearly erroneous.'' The Board's ruling rested on testimony from experts and the Board's own reasoning which appeared plausible.

MEMORANDUM AND ORDER

The State of Utah has petitioned for review of a series of Licensing Board orders concerning the hazard from a potential aircraft crash into Private Fuel Storage, L.L.C.'s (PFS's) proposed Independent Spent Fuel Storage Installation (ISFSI). The Board found, ultimately, that the probability of a release of radiation from an aircraft crash into the facility was less than one in a million, and therefore the facility complied with applicable NRC safety standards.[1] For the reasons set forth below, we deny the petition for review and we also authorize the NRC Staff to issue a license to construct and operate the PFS facility.[2]

---

[1] *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), Memorandum (Public (Non-Safeguards) Version (Regarding F-16 Aircraft Accident Consequences)), ADAMS ML050620391 (Feb. 24, 2005) and LBP-05-12, 61 NRC 319 (2005) (Memorandum and Order (Ruling on Reconsideration Motion)). *See also* LBP-03-4, 57 NRC 69, 122 (2002).

[2] *See* 10 C.F.R. § 2.764(c) (2004). Throughout today's decision we cite the NRC's former adjudicatory rules, which appear in the 2004 volume of the *Code of Federal Regulations.* In early 2004, the Commission issued new adjudicatory rules, but they do not apply to this case, which began before their promulgation. *See* Final Rule: ''Changes to Adjudicatory Process,'' 69 Fed. Reg. 2182 (Jan. 14, 2004).

I. BACKGROUND[3]

Because the proposed PFS facility would lie in Skull Valley, Utah — underneath the flight path of military aircraft — the possibility of an aircraft crash into the site raised concerns to which this agency has devoted much attention, including lengthy adjudicatory hearings before our Licensing Board. Air Force jets travel between Hill Air Force Base and the Utah Testing and Training Range over Skull Valley, including the proposed PFS site, at the rate of about 7000 flights per year.

NRC regulations require that ISFSIs be able to withstand ''credible'' accidents.[4] In this case, a significant question faced by the Board was how likely an aircraft crash had to be before it was considered ''credible'' — in other words, at what point does an accident become so unlikely that the Commission does not require that it be considered in the facility's design? The Board determined that any event having a less than one-in-a-million annual probability could be disregarded in the facility's design.[5] The Board referred its ruling to the Commission. A Commission decision agreeing with the Board was issued in November 2001.[6]

After extensive hearings in 2002, the Board, applying its ''credible'' accident criteria, ruled that an F-16 crash into the facility was within the design basis for the facility. The Board drew this conclusion after finding that the probability of an aircraft crashing into the proposed PFS site was more than one in a million — 4.29 in a million, to be precise.[7] The Board rejected PFS's theory that the likelihood of a crash into the facility would be measurably reduced by an ''R'' factor, representing the likelihood that the pilot of a crashing F-16 would deliberately steer the aircraft away from the PFS facility before ejecting. Consequently, the Board ruled, before the PFS facility could be licensed, PFS would have to show that such a crash would not release unacceptable levels of radiation. Accordingly, the Board called for a second hearing on the air crash issue, this one to consider the consequences of an F-16 crashing into the site.

---

[3] The public version of the Board's partial initial decision explains the background of this complicated proceeding in detail, so we will summarize only briefly here. The Board also issued a nonpublic, ''safeguards'' version of its order. *See generally* 42 U.S.C. § 2167; 10 C.F.R. § 73.21. That version discusses evidence and findings that cannot be made public because of security concerns. Our decision today discusses only publicly available information, but our ruling also relies on discussions and findings in the Board's Safeguards order.

[4] *See, e.g.,* 10 C.F.R. § 72.24(d)(2).

[5] LBP-01-19, 53 NRC 416 (2001).

[6] CLI-01-22, 54 NRC 255, 265 (2001).

[7] *See* LBP-03-4, 57 NRC at 122.

PFS and the NRC Staff sought Commission review of the Board's decision. Among other things, PFS claimed the Board erred in rejecting the ''R'' factor,[8] while the NRC Staff argued that the Board's ''4.29 in a million'' finding came close enough to the NRC's ''one in a million'' standard to deem the aircraft crash threat acceptably low.[9] The Commission held those petitions in abeyance until after the Board-ordered ''consequences'' hearing on the basis that probability and consequences are ''intimately linked'' and the Board's initial ''probability ruling . . . may be rendered moot or unimportant by subsequent Board findings.''[10]

The Board's effort to analyze radiological consequences of an aircraft crash into a facility has no adjudicatory precedent at the NRC.[11] Because the various possible crash scenarios are nearly limitless, the Board and the parties were plowing new ground in calculating the consequences of a ''credible'' aircraft accident. After much analysis, PFS proposed to carve out from all credible accidents a subset of accidents that it could prove, based on the speed and angles of impact, would *not* rupture the interior multipurpose canister, which is the last barrier to release of the fission products in stored spent nuclear fuel.[12] PFS argued that if the percentage of accidents that would *not* breach the canister was 80% or more, then the percentage of accidents that *could possibly* breach it must be 20% or less. In that case, PFS reasoned, the overall probability (20% of 4.29 in a million) that an accident could release radiation would be less than the one-in-a-million threshold.[13]

The parties performed complex computer simulations attempting to establish the dividing line between crashes the canister could survive without leaking and those it might not. Determining the breach probability had three basic steps. The first was to determine the maximum strain that the canister theoretically could survive without rupture. (The parties diverge at this point because Utah calculated that maximum strain before failure to be much lower than PFS and the NRC Staff did.)

PFS then selected a hypothetical ''bounding event'' accident that it said would not exceed the maximum strain and therefore would not breach a canister. Of necessity, any accident at a *lower* speed or *greater* angle than the ''bounding

---

[8] *See* Applicant's Petition for Review of LBP-03-04 (Mar. 31, 2003), at 8-9.

[9] *See* NRC Staff's Petition for Commission Review of the Licensing Board's Partial Initial Decision in LBP-03-04 (Mar. 31, 2003), at 6-7.

[10] CLI-03-5, 57 NRC 279, 283 (2003).

[11] Public Partial Initial Decision (PID) at A-10.

[12] *Id.* at B-3.

[13] *Id.*

event'' would have a lesser impact.[14] PFS did not fully analyze accidents exceeding the bounding event because the probability of those accidents was, by PFS's calculus, less than one in a million.[15] The probability of crashes exceeding the bounding event is referred to as the ''unanalyzed event probability.''

The last step for PFS was to demonstrate, based on statistical analyses of historic crashes, that 80% or more of the expected crashes at the site would indeed be within the bounding event.

Utah countered PFS's approach by challenging PFS's premise that its canisters would withstand the force of the so-called ''bounding event.'' Utah also maintained that a larger percentage of the predicted accidents would exceed the ''bounding event'' than PFS claimed.[16] The NRC Staff supported PFS's approach.

The Board found 2-1 in PFS's (and the NRC Staff's) favor, holding that the annual probability of a radiation-releasing air crash was less than one in a million.[17] The Board majority credited PFS's evidence on the performance of the multipurpose canisters in an air crash scenario, on the strains imposed by the bounding event crash, and on the relative probability of crashes below or exceeding the bounding event. The majority also emphasized that PFS's crash analysis included ''materially conservative assumptions . . . , leading to the logical conclusion that the probability computed by the Applicant (and agreed [to] by the Staff) is likely to materially overestimate the probability (perhaps by an order of magnitude).''[18]

In dissent, Judge Lam objected to the findings in favor of PFS for various reasons, some of which Utah reiterates in its petition for review. Judge Lam stated, for example, that there were insufficient data relating to historical crashes to reliably predict future crash probabilities. He also cited various uncertainties

---

[14] The particular speeds and angle discussed as the ''bounding event'' are considered safeguards material. The assumed angle of impact for the bounding event is near to the horizontal, because blunter angle impact at the same speed would have a less forceful impact on the cask.

[15] PFS submitted an analysis showing that some higher speed accidents would also not breach a cask. *See* Public PID at B-9.

[16] Utah also analyzed accidents with a slightly different speed and angle than PFS's hypothetical ''bounding event,'' but the force of impact of the ''bounding event'' accident is not in dispute in Utah's petition for review.

[17] *See* Public PID at B-8, C-1.

[18] The ''conservatisms'' include the following: (1) PFS's analyses assumed direct hits that would ''maximize'' damage, whereas in reality ''a large fraction of such incidents would be expected to be other than direct hits''; (2) it was assumed that an aircraft hitting the ''skid zone'' around the facility would continue undamaged to hit a canister, even though the aircraft would be unlikely ''to rebound off the desert without damage and without loss of part of its energy to the ground''; (3) because of the so-called ''R'' factor, there is some likelihood that a pilot would steer the aircraft away from the PFS site prior to ejection; and (4) PFS presented analyses indicating that the casks could withstand some higher speed impacts than the ''bounding speed impact.'' *See* Public PID at B-8 to B-9. *See also* LBP-03-4, 57 NRC at 92-98 (explaining the ''R factor'').

in the methods used to translate historical crash rates into a predicted rate.[19] In addition, Judge Lam stated that PFS should use a DOE-prescribed ductility ratio as the standard for predicting ''failure,'' at least of the canister's overpack.[20] He concluded that PFS had not met its burden to satisfy the 10^{-6} safety standard.

II. DISCUSSION

A. Motion for Reconsideration: 1 x 10^{-6} Probability Standard

As an initial matter, Utah asks the Commission to reconsider its 2001 decision setting a ''one-in-a-million'' (1×10^{-6}) threshold probability standard for a design basis air crash at the PFS facility.[21] Utah argues that the 2001 Commission ruling wrongly presupposed that the threshold standard had to be either one in a million or one in ten million, without considering the possibility of an intermediate number, for example (as Utah now suggests), one in five million.[22] Utah also disputes the Commission's finding that the consequences of an accident at an ISFSI would be more like an accident at a so-called geologic repository operations area (''GROA'') than at a nuclear power reactor.

The Commission's ruling compared the one-in-a-million threshold standard established for a GROA — a temporary storage area to be used in conjunction with a permanent repository for disposing of spent nuclear fuel — to the one-in-ten-million threshold standard established for a nuclear power reactor. The decision noted that in terms of both everyday operation and potential accident consequences, PFS's proposed ISFSI resembles a GROA more than a nuclear power reactor.[23] In addition, it pointed out that in previous rulemakings the NRC had announced its intent to ''harmonize'' regulations pertaining to ISFSIs and GROAs.[24]

Utah's new challenge to the one-in-a-million threshold probability standard amounts to an untimely motion for reconsideration.[25] Lateness alone is sufficient to reject Utah's reconsideration request.[26] Moreover, Utah's new argument fails

---

[19] *See* Public PID at D-2 to -3.

[20] *See id.* at D-4.

[21] CLI-01-22, 54 NRC 255 (2001).

[22] *See* State of Utah's Petition for Review of Contention Utah K (Aircraft Crashes) at 4.

[23] *See* CLI-01-22, 54 NRC at 264-65.

[24] *See id.* at 264, citing 61 Fed. Reg. 64,257, 64,262 (Dec. 4, 1996).

[25] *See* 10 C.F.R. § 2.786(e) (2004) (setting forth a 10-day deadline for filing a petition for reconsideration of a Commission decision).

[26] *See, e.g., Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-00-14, 51 NRC 301, 310-11 (2000) (late-filed motion for reconsideration requires good cause, as well as new information or changed circumstances).

to meet our reconsideration criteria. Reconsideration motions must be based on ''elaboration or refinement of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification.''[27] Utah's reconsideration request is none of these. Utah's argument for an intermediate accident probability standard, such as one in five million, was not raised in its 2001 appellate brief before the Commission.[28] Nor did the 2001 decision ''overlook'' legal principles or require ''factual clarification.'' As the Commission held in 2001, in rulemakings prior to this adjudication it was made clear that GROAs and ISFSIs are similar facilities and should have the same design bases.[29] The Commission stated that there is ''little basis'' for using a reactor-like probability standard at an ISFSI (or a GROA); an accident at a reactor poses a greater risk than the accidental release of stored spent fuel because the contents of the reactor are under pressure that presents a ''driving force behind dispersion'' of radioactive materials.[30] For these reasons, Utah's request does not make the requisite showing.

In any event, the Board found that even a small breach of a single storage cask was not credible in the event of a direct hit by the single-engine F-16. A single F-16 crash could not significantly damage more than one cask, so the total number of casks onsite — in other words, the total radioactive source term contained in the entire facility — is irrelevant. The number of casks increases the probability of a hit, but does not increase the potential consequences of a hit.[31] The Board's recent decision bolsters our 2001 ruling.

B. The Licensing Board's Rulings

The Commission will grant plenary appellate review of Licensing Board decisions — a discretionary step — in limited circumstances only. Among other things, we inquire whether there is reason to believe that (1) a Board ''finding of material fact is clearly erroneous,'' (2) a Board ''legal conclusion is without governing precedent or is a departure from or is contrary to established law,'' or (3) the Board committed a ''prejudicial procedural error.''[32] Here, because of the complexity of this proceeding, we granted the parties an increase in page limits

---

[27] *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-02-1, 55 NRC 1, 2 (2002).

[28] *See* ''State of Utah's Brief on the Question Certified in LBP-01-19: The Regulatory Standard for Aircraft Crash Hazards at the PFS Site — Contention Utah K (Credible Accidents)'' (July 13, 2001).

[29] CLI-01-22, 54 NRC at 264.

[30] *Id.* at 264-65.

[31] Similarly, Utah's argument that the proposed PFS facility is unlike the planned geologic repository in that PFS cannot control military overflight of the facility, goes to probability of a crash, not the similarity of the consequences.

[32] *See* 10 C.F.R. § 2.786(b)(4) (2004).

and extra time to file a petition for review and responses. After considering Utah's petition carefully we see no factual, legal, or procedural basis for disturbing the Licensing Board's carefully rendered decision in this case. Below, we set forth the reasons why we find Utah's petition unpersuasive.

1. Standard of Review

Utah's petition for review focuses largely on the Licensing Board's fact-driven evaluation of the evidence on air crash risks at the PFS facility. As we have held previously in this proceeding, our ''standard of 'clear error' for overturning a Board factual finding is quite high.''[33] ''A 'clearly erroneous' finding is one that is not even plausible in light of the record viewed in its entirety.''[34] The short of the matter is that we expect our licensing boards to review testimony, exhibits, and other evidence carefully and to resolve factual disputes. That is the boards' chief function in our adjudicatory system. Thus, unless there is strong reason to believe that in a particular case a board has overlooked or misunderstood important evidence, we will defer to its findings of fact.

This very proceeding illustrates why it is sensible to defer to the Board acting in its factfinding capacity. At the hearing leading to the ruling before us today, the Board heard from twenty witnesses, who presented 225 exhibits, over the course of 16 days. The hearing transcript spans over 4500 pages. In making its findings, the Board was required to sift through this evidence, to review studies and documents, and to make countless judgments on the credence to give each expert witness. We are not inclined to engage in any kind of *de novo* factual inquiry, particularly in a proceeding of this complexity, involving numerous experts and voluminous exhibits. As the United States Supreme Court has pointed out, the likelihood that a reviewing body will rely on the presumption of correctness of a trial court's factual determinations ''tends to increase when trial judges have lived with the controversy for weeks or months instead of just a few hours.''[35]

2. Cruise Missile Testing

Utah challenges the Board's 2001 summary disposition ruling that impacts from errant cruise missiles need not be considered in the design basis of the facil-

---

[33] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-03-8, 58 NRC 11, 25-26 (2003).

[34] *Tennessee Valley Authority* (Watts Bar Nuclear Plant, Unit 1; Sequoyah Nuclear Plant, Units 1 and 2; Browns Ferry Nuclear Plant, Units 1, 2, and 3), CLI-04-24, 60 NRC 160, 189 (2004) (internal citations and quotation marks omitted).

[35] *Bose Corp. v. Consumers Union of the United States, Inc.,* 466 U.S. 485, 500 (1984).

ity.[36] In that decision, the Board granted a PFS motion for summary disposition and found that a cruise missile accident at PFS is not a credible event. Utah argues that its air crash contention — ''Utah Contention K'' — is whether the cumulative probability of a crash from military activities, including cruise missile testing, constitutes a credible event. It was error, Utah says, for the Board to look at the probability of a cruise missile impact separately to determine that the probability of that event is too small for consideration.

But the Board's ruling, as we read it, was not based on the probability of a cruise missile impact falling below the 1×10^{-6} threshold probability for a credible event. Rather, the Board cited PFS's undisputed evidence that the flight path for cruise missiles tested at the Utah Test and Training Range would not be within 10 nautical miles of the facility.[37] The Board also relied on PFS's undisputed evidence that, according to Air Force officials, no cruise missile has crashed more than 1 mile off its flight path.[38] Given these two pieces of evidence, it was reasonable for the Board to conclude, as it did, that there was no material factual dispute suggesting that cruise missiles present any statistically significant threat to the facility. It is therefore not necessary to determine whether a cruise missile crash is sufficiently like an F-16 crash to necessitate adding the probabilities together to reach a total probability for threats from the air.

3. Loss of Shielding

Utah claims the Board committed a prejudicial procedural error in ruling on reconsideration that ''loss of shielding'' was not preserved as an issue in the second hearing.[39] Utah argued in its motion for reconsideration that even if the multipurpose canister was not penetrated in a crash, its concrete overpack could be stripped away, leading to excessive offsite radiation doses. Utah says the Board was wrong to end its analysis once it found that the canister would not rupture in a credible accident.

Utah argues that it never had the opportunity to present evidence on the loss-of-shielding claim because of the Board's ruling that the second hearing, rather than considering the ''consequences'' of a radiation release as originally envisioned, instead would focus on the probability of rupturing the canister. Excessive radiation doses due to damage to the overpack would go to the ''consequences''

---

[36] *See* LBP-01-19, 53 NRC 416, 424-29 (2001). As this ruling granted only a partial summary disposition, it was interlocutory and not appealable by the parties until the final disposition of this portion of the case.

[37] *Id.* at 427.

[38] *Id.*

[39] *See* LBP-05-12, 61 NRC 319 (2005).

of the crash, Utah says, an issue specifically precluded by the Board's prehearing ruling.[40]

In our view, the Board reasonably found that Utah had waived the right to argue about shielding loss by not bringing it up earlier. Our understanding of the procedural history of the air crash issue supports the Board's decision.

The first hearing on aircraft crash hazards examined the likelihood that an F-16 would crash anywhere on the site of the PFS facility.[41] After that hearing, the Board ruled against PFS, finding the likelihood of an F-16 crash onto the PFS site unacceptably high (an annual chance of 4.29 in a million). The Board found that the license could not be issued at that juncture unless PFS addressed the ''consequences'' issue, either by demonstrating that an F-16 would not penetrate a cask, or that, if it did, there would be no significant radiation doses to the public.[42]

Over the next year, the parties worked steadily to gather experts and statistics and perform the calculations necessary to determine what the ''consequences'' of an aircraft crash would be. It soon became clear that delineating between the ''probability'' of an aircraft crash and its ''consequences'' is not simple. To illustrate, if there is a 4.29 in 1 million chance that an F-16 would crash somewhere on the PFS site, a certain percentage of those crashes would not even hit a spent fuel storage cask, because portions of the facility site would be vacant or not used for spent fuel storage. A percentage of those crashes that did hit a spent fuel container would strike only a glancing blow. Some would be at high speed, and some would be at a speed too slow to inflict damage. Therefore, only a portion of the estimated 4.29 in 1 million crashes would actually result in damage to a cask.

After performing its calculations, PFS argued that even if the annual probability of a crash on the site was greater than one in a million, the probability of *significant damage* to a cask was below one in a million. It then asked the Board to limit the scope of the second hearing to the probability of a crash severe enough to penetrate the storage canister and to release contaminants. The Board agreed to limit the scope of the hearing to the probability of canister breach, which, as it pointed out, could be seen as either a part of the probability or the consequences factors of risk.[43]

Utah now argues that the Board's decision limiting the scope of the second hearing to the probability of a canister breach precluded it from making its

---

[40] *See* Memorandum Concerning Scheduling (April 15, 2004), at 2.

[41] The Board limited the scope of the first aircraft crash hearing in response to a PFS motion *in limine. See* Tr. at 3008; LBP-03-4, 57 NRC at 136-41.

[42] LBP-03-4, 57 NRC at 135.

[43] Memorandum Concerning Scheduling (April 15, 2004) (committing to writing the Board's April 8, 2004 oral decision), n.1.

argument that the ''loss of shielding'' from a damaged overpack would have unacceptable dose consequences even in the event that the canister was not penetrated. Utah argues that damage to the overpack should have been at issue in the second hearing because the parties repeatedly referred to ''cask breach'' and ''cask damage'' when discussing the results of an accident. Utah points out that the parties in this proceeding have regularly used the term ''cask'' when referring to the concrete overpack (which provides shielding), and ''canister'' when referring to the multipurpose canister inside (which confines the radioactive byproducts).

We conclude that the Board acted reasonably in deciding that Utah had not timely raised the overpack-shielding issue. It is evident from the record that the entire phase two hearing was aimed at determining the likelihood that the multipurpose canister would be breached, based on the assumption that only the release of radioactive materials from inside the spent fuel canister would raise concerns. Utah did not raise arguments or concerns about the shielding, either at the hearing itself or in the lengthy lead-up to the hearing. The NRC Staff pointed out in its argument on Utah's reconsideration motion[44] — and the Board emphasized in its reconsideration decision[45] — that Utah never even mentioned the phrase ''loss of shielding'' in any of the fifteen prehearing conferences leading up to the second hearing.

Utah, in short, never complained, until its reconsideration motion, that the Board hearing had focused on too narrow an issue — canister breach. It was Utah's burden to ''structure its participation so that it is meaningful, so that it alerts the agency to [its] position and contentions''[46] As the Board indicated,[47] had Utah presented its loss-of-shielding argument sooner, the phase two hearing might have been restructured to include the probability of an accident stripping the overpack in addition to (or rather than) the probability of perforating the canister. It is too late to take that tack now. We see no obvious abuse of discretion, or procedural error, in the Board's refusal to restart its phase two hearing in response to Utah's untimely loss-of-shielding claim.

---

[44] *See* Tr. at 19,771 (Staff searched the transcripts for the phrase). The Board also searched the transcript for the word ''shielding'' and it never appeared. *See* Tr. at 19,717. Although Utah could not point to any time when it specifically made this argument, Utah now claims that its position was evident from the whole of its presentation. But the Board found otherwise. On this point, we do not find a basis to second-guess the Board, which is much more familiar with the record and with the parties' statements and expectations than we are.

[45] LBP-05-12, 61 NRC at 327 (''*During the entire time the matter was under discussion the question of diminished shielding never arose*'' (emphasis in original)).

[46] *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council,* 435 U.S. 519, 553 (1978).

[47] LBP-05-12, 61 NRC at 328.

Indeed, accepting Utah's late claim would, in effect, return the complex probability-consequences inquiry to the starting line. The Board would first have to determine the probability that a crash would strip away a portion of the overpack before it went on to examine the offsite dose consequences of a partially or totally exposed canister.[48] In short, the parties would then be subject to another 3-week hearing and the months of investigation preceding it. Such a result would be patently unfair to PFS, the NRC Staff, and the Board, which have already focused extraordinary resources on the probability issues as originally framed.

Utah argues that potential violations of NRC dose limits cannot be waived by procedural default.[49] Utah's failure to raise its loss-of-shielding claim in timely fashion does not, however, waive NRC safety standards or excuse PFS from meeting them. It means only that Utah cannot litigate the loss-of-shielding issue at an NRC hearing. Absent a statutory ''mandatory hearing'' requirement, NRC licensing boards sit to resolve discrete (and timely raised) *contested* issues only.[50] We depend on the NRC's expert technical staff to ensure that our licensees meet all other agency requirements.

4. Rejection of DOE Standard for Failure Strains of Steel Components

Utah claims that the Board ''arbitrarily rejected'' a DOE standard for analyzing the performance of hazardous facilities in aircraft crashes.[51] At the phase two hearing, Utah urged the Board to use the DOE's Standard, *Accident Analysis for Aircraft Crash into Hazardous Facilities,*[52] to predict what strains PFS's multi-purpose canister could tolerate before failing in an aircraft crash. In particular, Utah argued that the Board should follow the DOE Standard's prescription of a ''ductility ratio'' of 20 as a criterion by which to gauge when the steels at issue would fail in tension. Rather than relying on the DOE approach, the Board relied on tests, placed in the record by PFS, showing the performance of stainless steel under tension.

The Board gave two reasons for not applying the portions of the DOE Standard Utah cites.[53] First, DOE's prescribed ''ductility'' ratios were apparently intended

---

[48] The Board might also have to determine the likelihood of other factors, for example, the probability that a crashing aircraft would strike a cask on the outside boundary of the formation (because radiation from a cask situated in the interior of the cask formation would be blocked from the boundary by the surrounding casks).

[49] *See* Utah's Petition at 12.

[50] *See generally Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5 (2005).

[51] *See* Utah's Petition at 17.

[52] U.S. Department of Energy, DOE Standard DOE-STD-3014-96, October 1996.

[53] *See* Public PID at B-3 to -4, B-10; LBP-05-12, 61 NRC at 332-33.

for a different type of structure, primarily buildings. Second, the type of failure the DOE Standard addressed was failure by collapse or deformation, not perforation. The Board's view was carefully considered and does not strike us as ''clearly erroneous'' or unreasonable. The parties argued the point during the phase two hearing and again at length at the oral argument on Utah's motion for reconsideration. The Board listened to a great deal of argument and testimony and considered numerous exhibits in making its decision.

The DOE Standard provisions that Utah cites prescribe a permissible ''ductility ratio'' to determine when a structure will fail by ''excessive structural deformation and collapse.''[54] If the strain of the crash exceeds the prescribed ratios, then the DOE Standard says that the steel structure is assumed to fail.

> 6.3.3.3 *Structural Evaluation Criteria.* Deformation responses computed for various target structural components . . . are then used to compute the ductility ratio (the ratio of computed displacement to elastic displacement). Computed ductility ratios are then compared to the permissible ductility ratios specified below to determine if the component would *deform excessively or collapse* under impact loads. . . .
>
> b. for steel structural components, the permissible ductility ratios shall be as specified in Section Q1.5.8 of AISC Nuclear Specification, ANSI-N690 (Reference 11). For plate structures, the permissible ductility ratio of 10 is recommended.[55]

In calculating how much strain PFS's multipurpose canister could withstand, both PFS and the NRC Staff looked at experimental data that showed the canister's stainless steel makeup could tolerate 90% true strain in tension before it failed by rupture.[56] By comparison, the DOE Standard-prescribed ductility ratios would result in much more frequent assumed failures — 1/40th the strain of the experimentally determined failures.[57] PFS and the NRC Staff advocated deriving an assumed canister failure rate by reducing — in accordance with customary engineering practice — the experimentally determined strain to allow a safety factor of two or three.[58] Their approach won the approval of the majority of the Board.

---

[54] *See* DOE Standard at 35, § 4.3c. A ductility ratio is the ratio of computed displacement to elastic displacement or the yield strain. The yield strain is the point at which the material is changed from elastic to plastic, in other words, when it will be permanently deformed.

[55] *See* DOE Standard at 76, § 6.3.3.3 (emphasis added.) *See also* note 61, below.

[56] *See* Public PID at B-4.

[57] *See id.*

[58] *See id.*

a. The DOE Standard Is Intended for a Different Type of Structure Than the Multipurpose Canister

The Board observed that the DOE Standard addressed collapse of buildings, which are typically constructed of carbon steel, not stainless steel like a multipurpose canister.[59] Stainless steel is considerably more ductile than carbon steel — that is, it will bend farther without breaking. Vessels such as the multipurpose canister tend to be constructed of stainless steel.[60] The portions of the DOE Standard that Utah seeks to apply refer to an ANSI/AISC Standard that explicitly excludes pressure vessels.[61]

Utah now argues only that (1) the DOE Standard never explicitly says it does *not* apply to stainless steel pressure vessels and (2) an appendix to the DOE Standard describes how to evaluate potential exposure patterns in case a pressure vessel containing hazardous materials ruptures in an airplane crash. But neither argument persuades us that the Board's decision — to look at actual stainless steel performance instead of attempting to ''fit'' the problem to some preexisting code — was wrong. Utah apparently does not dispute the proposition that stainless steel would perform differently from carbon steel in a crash. Utah does not offer any evidence that the two types of steel would perform similarly. Nor do we see any reason why the Board should have applied the DOE Standard to pressure vessels when that standard relies on an ANSI standard that explicitly excludes pressure vessels. Finally, the appendix that Utah cites is used to determine various exposure scenarios when a hazardous material container is breached; it is not used for determining whether a breach has occurred.

b. The DOE Standard Addresses a Different Failure from That at Issue Below

It is apparent, as the Board found, that the portions of the DOE Standard that Utah advocates were not intended to address the type of failure that lies at the heart of the matter here. The majority of the Board determined that the ductility ratios in that standard were developed to determine the ability of structural components to carry loads: ''[T]here was no justification for us to adopt a standard ductility ratio, developed for other situations, when that standard ratio was not shown to be relevant to, or derived from experiments about, the particular type of failures

---

[59] *See id.* at B-10 (discussed in more detail in Safeguards PID at B-12 to -13); LBP-05-12, 61 NRC at 332-33.

[60] Soler/McMahon Reb., Post Tr. 15,228 at 15. Utah does not dispute this, but rather cites this testimony in its brief.

[61] ANSI/AISC Standard N690, *Specifications for the Design, Fabrication, and Erection of Steel Safety-Related Structures for Nuclear Facilities* (1994), at 23.

at issue here.''[62] Judge Lam, in his dissent, thought the DOE Standard applicable to the concrete and carbon steel overpack, but his dissent takes no position on whether the ''ductility ratios'' should be used to determine perforation of the multipurpose canister.[63]

The Board found that the DOE's ductility ratio did not answer the specific question at issue in the hearing — when the multipurpose canister would rupture and allow its contents to escape. The portions of the DOE Standard invoked by Utah may help determine whether a steel component may fail by buckling or deformation. Other provisions of that standard address failure by penetration (the failure of concern here), but Utah does not advocate using those provisions.[64] At the hearing below, the Board did not need to inquire whether the canister might be deformed or even weakened by the impact — rather, the Board considered the narrower question of whether the canister would *leak.* The Board held that Utah's preferred DOE Standard was not helpful in resolving that question.

The Board explained that other kinds of damage were not at issue in the proceeding because only a release of fission products would have offsite effects:

> [A]n incident which does not release radiation, but nonetheless causes the overpack and the [multipurpose canister] to be so damaged that the fuel contained within the [multipurpose canister] is no longer intact, may well be significantly more likely than one which is so damaging that radiation is released. *But such incidents are not at issue here.* Under the regulatory system, such incidents — because they are not radiation releasing — are to be dealt with by a licensee if and when they occur. Under that circumstance, the agency will become heavily involved (as it does in the aftermath of any accidents) to assure that possible effects of radiation arising out of the recovery operations are safely handled. Such incidents may present a serious problem in terms of what it takes of a licensee to clean up, but with no radiation ''consequences,'' they do not have to be designed against.[65]

---

[62] LBP-05-12, 61 NRC at 333.

[63] Judge Lam argued:

> A singularly important but unresolved dispute with respect to the Applicant's structural analysis is the Applicant's declination to adopt the DOE ductility ratio standard as the failure criterion for the spent fuel storage cask. The DOE ductility ratio standard was developed by a group of experts, assembled by the Department of Energy, to protect facilities containing radioactive or chemical materials from the hazards of an accidental aircraft crash.

Public PID at D-4 (citations omitted).

[64] *See* DOE Standard at 35, § 4.3b. ''Local damage to steel targets: 1. penetration — to prevent perforation of a steel target, the minimum wall thickness required is at least 125 percent of the predicted penetration depth.'' *See also* DOE Standard at 69-70, § 6.3.2.2 Local Response Evaluation — Evaluation of Steel Targets.

[65] Public PID at B-2 (emphasis in original).

In sum, we find no clear error of fact in the Board's decision to use experimental data rather than the DOE Standard. The Board explained in detail its reasoning in rejecting the DOE Standard, both in its original ruling and on reconsideration, and its reasoning rested on the evidence before it.

We should also observe that all three parties, NRC Staff, PFS and Utah performed extensive computer simulations, using sophisticated computer codes, and found as a common result that ''*the maximum strain computed to occur in the [multipurpose canister] was well below (by at least a factor of eight or nine) the experimentally determined failure strain.*[66] Thus, there is a wide margin of safety.

There is no basis for further Commission review.

5. Claimed Errors in Calculating Probability[67]

Utah next argues that the Board used skewed accident data when estimating the probabilities of air crash accidents at various speeds.[68] Utah claims that the Board should have eliminated seven historical accidents that Utah says were dissimilar to possible Skull Valley accidents, and which had the effect of shifting the probability distribution toward slower speeds. In addition, Utah also argues that the Board arbitrarily eliminated from consideration certain hypothetical ''top impact'' crashes that should be considered ''unanalyzed events.''

As discussed above, the Board found acceptable PFS's ''bounding aircraft impact'' representing the top speed for the majority of accidents.[69] The ''bounding speed'' the Board used rested on PFS's structural analysis showing that its canister would not rupture at that or any lower speed. The bounding event is not necessarily a precise ''cutoff'' between crashes that would breach the canister and those that would not. The actual ''cutoff'' might well be at higher speeds than the bounding

---

[66] *See id.* at B-3 (emphasis in original).

[67] As noted above, in countering Judge Lam's dissenting view that too many uncertainties infected PFS probability analysis, the Board majority pointed to ''large conservatisms . . . built into the analyses.'' *See* Public PID at B-12; *see also id.* at B-8 to B-9. Utah's petition for review says that the Board's ''conservatism'' finding rests on ''subjective judgement, speculation and lack of evidentiary support.'' *See* Utah's Pet. at 26 *et seq.* But, as set out in detail in PFS's response to the petition for review, ample record evidence supports the Board's finding. *See* Applicant's Response to State of Utah's Petition for Review of Contention Utah K, at 25-29. In any case, the Board did not reduce the calculated probability at all to account for the conservatisms. Utah does not come close to suggesting there was ''clear error.''

[68] *See* Utah's Petition at 21-26.

[69] The Board accepted PFS's bounding speed and angle over Utah's (which involved a slower speed and slightly different angle) because it found that *neither* impact would have sufficient strain to breach a cask. Since either bounding speed was within the bounds of safety, it was appropriate to use the larger set (higher bounding speed) when calculating the relative probabilities of crashes within or outside the bounding speed. *See* Public PID at B-5 (explained more fully in safeguards version).

event. But because PFS's calculations showed that crashes at higher speeds, while not impossible, were too improbable to be credible, the effects of those impacts were not analyzed. Thus, higher speed accidents are unanalyzed events and the probability of their occurrence is called the ''unanalyzed event probability.''

Utah argues that PFS (and the Board) set the unanalyzed event probability too low. In other words, according to Utah, certain higher speed crashes are more likely than the Board figured and therefore should have been considered credible. Utah claims that the Board ''ignore[d] critical evidence'' that the unanalyzed event probability exceeds one in a million.[70]

a. Seven Disputed Crashes

Utah would eliminate from consideration seven historical crashes that occurred at low speeds when the pilot delayed ejection in an attempt to land following engine failure. Including these accidents, which Utah says could not take place in Skull Valley, made the probability of a crash at lower speeds seem more likely.

Because there are limited available data of actual F-16 crashes, determining the probability of crashes at particular speeds and angles within Skull Valley proved a challenge for the parties and the Board. Of 121 accidents worldwide for which data were available, PFS identified 61 that it thought were of a type possible in Skull Valley. Further analysis eliminated four of those that were runway accidents, and therefore not possible in the air over Skull Valley, leaving fifty-seven for the Board's analysis.

The Board considered the historical data issue at hearing and again in response to Utah's motion for reconsideration.[71] At the hearing, Utah sought to eliminate thirteen additional crashes,[72] but on reconsideration focused its argument on the seven crashes on which it bases its petition for review.[73] As with the Board's other factual findings, the Board's decision on which historical air crashes to include and exclude from its probability calculation is not ''clearly erroneous.''

It is apparently undisputed that an F-16 could not take off or land in Skull Valley.[74] But the Board did not find this sufficient reason to eliminate the seven crashes now in dispute, even though they involve accidents where the pilots were looking to land, because the crashes were all initiated by the type of engine failure that *could* occur in Skull Valley. The Board found that these accidents were ''fairly representative of one end of the range of crash scenarios.''[75]

---

[70] *See* Utah's Petition at 21.

[71] Public PID at B-7 to -8; LBP-05-12, 61 NRC at 334-36.

[72] Safeguards PID at B-20.

[73] LBP-05-12, 61 NRC at 335.

[74] *See id.* at 319.

[75] *See id.*

We find no clear error in the Board's ruling. Even assuming that Utah is correct in its view that eliminating these crashes from the data set would shift the probability distribution toward higher speeds, it is not clear that the result would be a more accurate prediction of future Skull Valley accidents. The Board found that the significant feature of the seven disputed crashes is that they resulted from engine failure. The Board explained that in case of engine failure, pilots are trained to trade forward speed for higher altitude, thus giving the pilot more time to attempt to restart the engine prior to ejecting.[76] Of the fifty-seven accidents the Board agreed were relevant, 91% involved loss of engine power. In 63% of the loss of engine power accidents, it appeared that the pilot followed proper procedures.[77] And when the pilot follows procedures, the Board found, the aircraft crashes at a speed that ''at any angle, is well below the speed of the Bounding Aircraft Impact.''[78]

For these reasons, a pilot experiencing engine failure over Skull Valley would probably not attempt to land; he would be expected to follow the above procedures to attempt to restart the engine. Utah has not given us reason to believe that most engine failure crashes would actually occur at higher speeds than in the seven disputed incidents.

It is also clear that there is more than one way to consider the data. For example, PFS suggested that if the Board were to eliminate the seven disputed incidents, then it should also ''weight'' the remaining crashes to reflect their likelihood of occurrence in Skull Valley. PFS argued that because the vast majority of flights in Skull Valley are at the 3000- to 4000-foot altitude range, the Board could ''weight'' historical accidents occurring at that initial altitude more than accidents that initiated at higher altitudes, which tend to result in higher speed impacts.[79] Weighting the probabilities would skew the data back toward slower speeds. The Board considered still other approaches to evaluating the available data, but concluded that using the entire set of fifty-seven Skull Valley-type events would maximize the use of available data.[80]

The Board's inclusion of the seven disputed engine failure accidents does not appear to us ''clearly erroneous'' — that is, not even ''plausible'' on the record.[81] The Board, in any event, found no reason to believe that a reanalysis, leaving out

---

[76] *See* Public PID at A-6.

[77] *Id.* at B-6.

[78] *Id.* Another 10% of relevant historical accidents were ''deep stall'' incidents where the aircraft falls vertically to the ground ''like a leaf.'' A deep stall accident would not strike a cask with a force exceeding the bounding impact. *Id.*

[79] *See* LBP-05-12, 61 NRC at 335.

[80] *See* Safeguards PID at B-23.

[81] *See Watts Bar,* CLI-04-24, 60 NRC at 189.

the seven disputed accidents, would raise the unanalyzed event probability above acceptable bounds.[82]

b. Side Impacts Following Top Impacts

Utah claims that the Board erroneously eliminated from consideration side impacts to a second cask after an F-16 first strikes the top of another cask. Utah argues that after a shallow impact to the top of a cask, an aircraft could continue without a significant loss of speed to crash into the side of another cask.

Again, we see no basis for declaring the Board's decision ''clearly erroneous.'' The Board accepted PFS's expert's testimony that in the case of impacts to the top of the cask, the critical concern is the *vertical* speed at which the aircraft is traveling. An F-16 coming in at a shallow angle (close to the horizontal) would have a vertical speed much slower than the aircraft's overall speed. Therefore if the vertical speed were within the bounding event speed, then the crash would be within the bounding event.

Utah argues that any top impact with a *horizontal* speed greater than the bounding impact speed should be considered an unanalyzed side impact to neighboring casks. Therefore, Utah argues, the unanalyzed event probability is higher than the Board found.

The Board considered this argument on reconsideration, and rejected it. The Board explained why it would not expect such grazing, or ''topping,'' incidents to contribute materially to the unanalyzed event probability.[83] Due to the arrangement of casks in the storage area, initial top impacts are more likely, because the sides of most casks are somewhat shielded by neighboring casks. Therefore, all potential crashes were divided into ''top impact'' or ''side impact'' for analysis, with the parties calculating the effective area for all tops or sides of casks that could be exposed to accident.

PFS introduced the testimony of Dr. Alan I. Soler[84] at the hearing. He testified that an F-16 hitting the top of one cask at a high speed and shallow angle would not drop more than a few inches before hitting the next cask, and the tops of the casks have protuberances that would snag on the F-16's underside, preventing it from simply skipping to the next cask without loss of momentum.[85] The Board addressed this point in its reconsideration ruling. Where a major portion of the

[82] *See* LBP-05-12, 61 NRC at 336.

[83] *See id.* at 336-41.

[84] Ph.D. (Mechanical Engineering); Executive Vice President for Engineering, Holtec International (lead structural expert for design of the HI-STORM 100 cask system).

[85] LBP-05-12, 61 NRC at 337; Testimony of Dr. Soler, Tr. 19,555-67.

F-16 strikes the top of a cask, the Board said, it will ''suffer material deformation'' and ''lose substantial momentum.''[86]

Because of these factors, the Board found, the only way a craft hitting the top of a cask could continue unimpeded to strike the side of the next cask would be if it struck a glancing blow to the far side of the cask (that is, if only a small portion of the F-16's fuselage hit the cask top).[87] The Board reasoned that accounting for these side impacts would simply reallocate some impacts from ''top'' to ''side'' and ''*effectively enlarge*[ ], *from a computational perspective, the cross-sectional area of the sides of the casks being impacted.*''[88]

Relying on an estimate provided by the NRC Staff's expert, Dr. Dennis R. Damon,[89] the Board found that although this reallocation would increase the unanalyzed event probability, it would not be by enough to raise it to one in a million or more.[90] Reallocating some top impacts to side impacts would increase the unanalyzed event probability because the top impact was measured by vertical speed and the side impact would be measured by the greater horizontal speed.

Utah claims that simply reallocating a small fraction of ''grazing'' top impacts is not enough. It argues that every top impact with a horizontal speed exceeding the bounding speed should be considered to be an above-bounding impact to neighboring casks without regard to where on the cask lid the aircraft hits. It complains that the Board's analysis ''allows countless high impact crashes to escape any contribution towards the probability of breach because the F-16 first strikes a cask top and the fact that it could continue on at speeds sufficient to breach is disregarded.''[91]

Utah's petition has two problems: first, Utah does not specify the number of crashes with which it is concerned, and, second, its overarching theory of unimpeded secondary impacts seems to us unproven, if not far-fetched. The Board already has determined that the majority of crashes would not occur at speeds sufficient to breach a canister regardless of whether the impact was to the top or sides. Utah says the probability of a sufficiently high speed top impact is 1.94×10^{-7}, based on a calculation performed by PFS's expert Dr. Allin Cornell. According to PFS, however, that calculation was performed merely to determine the effect Utah's ''unrealistic'' scenario would have on the unanalyzed event probability.[92] The second difficulty we have with Utah's argument is

---

[86] LBP-05-12, 61 NRC at 339.

[87] *Id.*

[88] *Id.* (emphasis in original).

[89] Ph.D. (Nuclear Engineering), Senior Level Advisor for Risk Assessment, Office of Nuclear Material Safety and Safeguards.

[90] LBP-05-12, 61 NRC at 341 (total unanalyzed event probability would be 7.8×10^{-7}).

[91] Utah's Petition for Review at 22.

[92] PFS Brief at 23 n.53.

understanding the mechanics of such a crash. An expert's opinion does not seem necessary to conclude that an F-16 cannot simply pass unimpeded through several feet of steel and concrete. Conceivably, we suppose, there could be a crash where an F-16 would hit the top of the cask at an angle and push it over, allowing the aircraft to continue on its trajectory. If so, however, Utah has given us no record evidence to support it or to perform probability calculations. The only relevant expert evidence called to our attention is that of Dr. Solar — who said that an F-16 hitting squarely on the top of a cask lid would itself bear the brunt of the impact.

Therefore, Utah has not demonstrated that the Board committed any error, much less ''clear error,'' in deciding this issue.

III. LICENSE ISSUANCE

Our decision today concludes this protracted adjudication — which has generated more than forty published Board decisions and more than 30 published Commission decisions. The adjudicatory effort, plus our Staff's separate safety and environmental reviews, gives us reasonable assurance that PFS's proposed ISFSI can be constructed and operated safely. We express our appreciation for the diligent efforts of all involved in the adjudication — the Intervenors (particularly the State of Utah), the NRC Staff, and PFS itself.

There are no remaining adjudicatory issues to resolve. Accordingly, once it has made the requisite findings pursuant to 10 C.F.R. § 72.40, the Staff is authorized to issue PFS a license to construct and operate its proposed ISFSI.[93]

IV. CONCLUSION

For the foregoing reasons, Utah's petition for review is *denied,* and the NRC Staff is *authorized* to issue to PFS a license to construct and operate its proposed ISFSI.[94]

---

[93] Under 10 C.F.R. § 2.764(c) (2004) the NRC Staff cannot issue a license to construct and operate an away-from-reactor ISFSI without express Commission authorization. In this case we might have authorized license issuance earlier this year, once the Board issued its last partial initial decision, and notwithstanding Utah's subsequent reconsideration motion and petition for review. *See, e.g., Massachusetts v. NRC,* 924 F.2d 311, 322 (D.C. Cir. 1991), *cert. denied,* 502 U.S. 899 (1991). We decided, however, to hold off on license issuance until (in consultation with our technical and legal staff) we could complete our consideration of Utah's concerns.

[94] In view of today's decision, we need not consider the petitions for review still before us (held in abeyance) that challenge the Licensing Board's original probability ruling. *See* notes 8-10, *supra,* and accompanying text. Those petitions are, in effect, moot.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 9th day of September 2005.

Commissioner Gregory B. Jaczko respectfully dissents, in part:

I appreciate the efforts of all parties involved in this long and detailed adjudication. I join in the Commission's decision to the extent the decision addresses the issues raised in the State of Utah's brief to the Commission seeking review of the final licensing board actions. I, too, am unconvinced by the arguments raised by the State of Utah in its brief and would defer to the Board's findings of fact regarding these issues.

I dissent in part because I believe the decision involves an important interpretation of the Commission's regulations and associated guidance related to aircraft hazard analyses that has not been adequately addressed — that of when an actual consequence analysis should be performed. Because I believe the final figures reached by the Board's calculation (which I do not disagree with) render an accident credible, I believe an additional analysis of the consequences of the F-16 aircraft hazard should be assessed prior to the issuance of the license.

As the NRC Staff described in earlier briefs, the probability of a credible aircraft crash at the PFS site is calculated to be right at the established threshold at which additional analysis of the consequences of a crash is required. There is detailed analysis in the record of the exhaustive efforts to determine whether the actual probability is a fraction above that threshold or a fraction below. This analysis unfortunately missed the point and resulted in lengthy and unnecessary delays in this adjudication. An objective review of the inherent uncertainties associated with a calculation of this magnitude makes it clear that the probability of an accident is ''about'' at the threshold which makes it credible. The precedent-setting question then is, if the probability falls right at the established standard, what is the appropriate action for the Commission to take to ensure the adequate protection of the public?

I believe that in such situations fraught with uncertainty, it is the Commission's responsibility to approach these issues cautiously. The standard for establishing whether or not an accident is credible must be respected and if it is reached, the Commission should require the additional analysis necessary to determine any

potentially harmful consequences. If those consequences could result in radiation exposures to the public that are above the exposure limits as defined by NRC regulations, then applicants are required to design against those possibilities.

These hearings were originally proceeding along this very path, but unfortunately never reached this logical conclusion. In an extensive opinion, the Licensing Board found that the Applicant, Private Fuel Storage, failed to show that the probability of an aircraft hazard was less than approximately 10^{-6}. The Board stated ''there is enough likelihood of an F-16 crash into the proposed facility that such an accident must be deemed 'credible,' '' requiring an additional analysis of the design of the facility to show that such credible accidents would not result in a radiation exposure that exceeds the limits of 10 C.F.R Part 100.[95] Specifically, the Board found that the probability of an accident was 4.29×10^{-6} per year, which exceeded the approximate 10^{-6} threshold for credibility.[96] The Board's finding on this issue was based on an understanding that the calculation for this probability was determined using the ''classic four-factor NUREG-0800 formula.''[97] Following a challenge of this decision to the Commission by the Applicant, the Board's decision was upheld.[98] As a result, the Applicant was forced to further evaluate the aircraft hazard.

The decision now before the Commission depends exclusively on a refinement of the calculation by the Board and I have concerns about the Board's application of this refined calculation. In arriving at the new probability for an aircraft hazard, the Board adopted a new calculation that involved a consideration not only of the probability of an accident, but also the probability that an F-16 which crashed at the facility would breach one of the casks, leading to radiation exposure. After a contentious and complicated hearing, the Board found that the new probability was 0.74×10^{-6} and, more important, found that this number was *below* the threshold of 10^{-6}, eliminating aircraft hazard as a credible accident scenario.

As I indicated above, I do not dispute the Board's determination that this new probability calculation was 0.74×10^{-6}, but I do dispute the conclusion of the Board that this meets the established screening criteria to eliminate the aircraft hazard as a credible scenario. The Staff's brief to the Commission appealing LBP-03-4, also supports this argument. There, the Staff indicated that, ''Dr. Campe testified that the criterion [for determining credibility of aircraft hazard] is expressed as an order of magnitude criterion — i.e., an approximate value.'' He further testified that typically, order of magnitude thresholds are viewed as

---

[95] *See* LBP-03-4, 57 NRC 69, 77 (2003).

[96] *Id.* at 88.

[97] The Applicant argued that this formula should be modified to account for pilot actions in the event of a crash, but the Board rejected this argument in LBP-03-4, leaving the traditional four-factor formula.

[98] *See* CLI-03-5, 57 NRC 279.

midpoints, such that 5×10^{-6} would be the dividing point between 10^{-6} and 10^{-5}.[99] Although the Staff was arguing in that instance that, since the initial probability of an aircraft crash of 4.29×10^{-6} per year was consistent with 10^{-6} per year, the aircraft hazard should not be considered credible, I agree that the Staff's description of the *interpretation* of the probability calculation is correct. In other words, the Staff is correct that 4.29×10^{-6} is *of the same order of magnitude* as 10^{-6}. Similarly 0.74×10^{-6} is *of the same order of magnitude as* 10^{-6}. The important content of the calculated number is just the order of magnitude.

I believe this is an important issue, because the Board has now effectively overturned Commission precedent in having flexibility to deal with the approximate probabilities in NUREG-0800. As NUREG-0800 clearly states, ''This requirement is met if the probability of aircraft accidents resulting in radiological consequences greater than 10 CFR Part 100 exposure guidelines is less than about 10^{-7} per year (see SRP section 2.2.3).''[100] Probability calculations of this kind are extremely difficult and fraught with uncertainty and can be rendered meaningless if the numerical results are given greater specificity than they actually inherently contain. For that reason, the Staff correctly drafted and interpreted NUREG-0800 to reflect an order of magnitude estimate, not an absolute number. As the Staff brief indicates, citing several cases, ''[f]or events the estimated probability of which is of the order of 10^{-7} per year, there is virtually no hope that there will ever be sufficient data available to obtain a precise measured value.''[101]

The Board majority and minority acknowledged the practical realities of this Staff position in the difficulties of making its decision. Judge Farrar stated, ''[i]n contrast, even those of us in the majority recognize that the F-16 accident crash challenge presents a close case, in which the demonstrated margins are, by our lights, narrow (and not persuasive to our dissenting colleague).''[102]

As a result, I believe the Board erred by establishing a new interpretation for the NUREG-0800 approximate probability, essentially replacing the credibility standard of ''about 10^{-7}'' with ''exactly 10^{-7}.'' Using the Staff's reasoning, the Board should merely have looked at the *second* probability calculation as providing an order of magnitude estimate, which would be 10^{-6}. Thus, the *second* probability calculation failed to show conclusively that the aircraft accident was not credible, that is, *less than* 10^{-6}.

Thus the Commission needs to consider alternative criteria to determine whether the aircraft hazard is high or low risk. The probability analysis simply failed to provide information useful in ruling out aircraft hazard as a credible

---

[99] Staff's Petition for Commission Review, March 31, 2003, at 6.

[100] *See* NUREG-0800 § 3.5.1.6 (emphasis added). Although NUREG-0800 references 10^{-7}, the Commission determined in CLI-01-22 that the appropriate numerical standard in this case is 10^{-6}.

[101] *Id.*

[102] *See* Board's Public Memorandum and Order (Feb. 24, 2005), at B-13.

threat. That leaves the Applicant with only one option — complete a full consequence analysis of the design of the facility to show that the consequences of a credible aircraft crash will not lead to exposures above the 10 C.F.R. Part 100 limits. Such an approach would assure the adequate protection of public health and safety.

Although I have expressed my views in a slightly different manner, my concerns draw upon the dissent of Judge Lam. I agree fully with his conclusions that, ''[m]ore needs to be done. The Applicant should demonstrate that a breached spent fuel storage cask would not result in a site-boundary radioactive dose exceeding regulatory limits, or should implement other remedies such as the installation of physical barriers. Such a decisive demonstration, or the implementation of genuine remedies, would ensure the adequate protection of public health and safety.''[103]

Therefore, I dissent in the decision of the Commission to authorize the Staff to issue to Private Fuel Storage a license to construct and operate its proposed storage facility at this time. The misinterpretation of our regulations should be remedied by performing the necessary consequence analysis to ensure the adequate protection of the public health and safety from the issuance of this license.

[103] *Id.* at D-7.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Alex S. Karlin, Chairman
Dr. Anthony J. Baratta
Lester S. Rubenstein

In the Matter of **Docket No. 50-271-OLA**
(ASLBP No. 04-832-02-OLA)

ENTERGY NUCLEAR VERMONT YANKEE, LLC, and ENTERGY NUCLEAR OPERATIONS, INC.
(Vermont Yankee Nuclear Power Station)

September 1, 2005

RULES OF PRACTICE: CONTENTIONS (MOOTNESS)

A contention of omission becomes moot when the omission is cured.

RULES OF PRACTICE: CONTENTIONS (OMISSION)

A contention that the ''minimum appropriate'' seismic analysis has not been done and that the Applicant ''cannot assure seismic and structural integrity,'' while containing certain qualitative aspects, can nevertheless be treated as a contention of omission where the petitioner itself characterized it as such, and where, when the contention was admitted, there was no relevant seismic analysis.

RULES OF PRACTICE: CONTENTIONS (NEW)

Rather than allow an Intervenor to transform a contention of omission into a broad and undefined challenge to the quality of the documents that cured the

omission, the contention is dismissed as moot and the Intervenor may file new or amended contentions under 10 C.F.R. § 2.309(f)(2) challenging the adequacy of the documents.

MEMORANDUM AND ORDER
(Granting Motion To Dismiss NEC Contention 4)

Before the Board is a motion by Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (collectively, Entergy) seeking to dismiss as moot New England Coalition's (NEC) Contention 4, or in the alternative for summary disposition.[1] For the reasons stated below, the Board dismisses NEC Contention 4 as moot.

I. BACKGROUND

As admitted by the Board, NEC Contention 4 reads as follows:

> The license amendment should not be approved because Entergy cannot assure seismic and structural integrity of the cooling towers under uprate conditions, in particular the Alternate Cooling System cell. At present the minimum appropriate structural analyses have apparently not been done.

LBP-04-28, 60 NRC 548, 580 (2004). In admitting the contention, we explained that the ''contention focuses on the alleged need for Entergy to perform a seismic and structural analysis of the cooling towers under the proposed uprated conditions'' and that ''the fact that Entergy may intend to conduct such an analysis does not eliminate this genuine dispute, because Entergy could change its intent at any time unless, as NEC argues, it is required to perform the analysis.'' *Id.* at 573.

In early 2005, after NEC Contention 4 was admitted, Entergy performed a structural and seismic analysis of the cooling towers and the Alternate Cooling System (ACS) that takes into account the cooling tower upgrades associated with the proposed extended power uprate (EPU).[2] The cooling tower and ACS structures were evaluated by creating a model of the main structural framing members as beam elements and applying the deadweight and mass of the tower internals at member intersections, accounting for dead load, snow and ice load, and

[1] Entergy's Motion To Dismiss as Moot, or in the Alternative, for Summary Disposition of New England Coalition Contention 4 (July 13, 2005) [hereinafter Entergy Motion].

[2] Entergy Motion, Declaration of George S. Thomas (July 10, 2005), ¶ 9 [hereinafter Thomas Decl.].

seismic loading conditions. *Id.* ¶ 10. Based on the results from these calculations, Entergy concluded that there is no need for structural modifications to the ACS cell or the adjacent cell. *Id.* ¶ 11.

Entergy's current motion asserts that its recent structural and seismic analysis of the cooling towers and ACS under EPU conditions cures the alleged omission and renders NEC Contention 4 moot. Entergy Motion at 3-4. Entergy also argues, in the alterative, that summary disposition on NEC Contention 4 is appropriate because there is no genuine issue of material fact remaining to litigate and Entergy is entitled to a decision as a matter of law. *Id.* at 4-6. The NRC Staff supports Entergy's motion to dismiss, or in the alternative, for summary disposition.[3] NEC opposes Entergy's motion, arguing the contention is not moot and Entergy is not entitled to summary disposition because the analysis that Entergy has provided contains a number of serious flaws.[4]

II. ANALYSIS

In our earlier dismissal of State Contention 6, we discussed the standard for handling contentions of omission, observing:

> The Commission has stated that ''[w]here a contention alleges the omission of particular information or an issue from an application, and the information is later supplied by the applicant . . . the contention is moot.'' *Duke Energy Corporation* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 383 (2002). In order to raise specific challenges to the new information, an intervenor must ''timely file a new or amended contention that addresses the factors in section [2.309].'' *Id.* Without such a requirement, contentions of omission ''could readily be transformed — without basis or support — into a broad series of disparate new claims,'' effectively circumventing the purposes of the rules governing contention admission: (1) providing notice of the issues to be litigated; (2) ensuring the existence of at least minimal factual and legal foundation for the alleged claims; and (3) ensuring there exists an actual genuine dispute on a material issue of law or fact. *Id.*[5]

Like State Contention 6, NEC Contention 4 is a contention of omission. In admitting NEC Contention 4, we stated that ''[t]he gist of this contention is that

---

[3] NRC Staff's Answer to Entergy's Motion To Dismiss as Moot, or in the Alternative, for Summary Disposition, of New England Coalition Contention 4 (July 25, 2005) at 1 [hereinafter NRC Answer].

[4] New England Coalition's Answer Opposing Entergy's Motion To Dismiss as Moot, or in the Alternative, for Summary Disposition of New England Coalition's Contention 4 (Aug. 2, 2005) at 5-12 [hereinafter NEC Answer].

[5] Licensing Board Memorandum and Order (Granting Motion To Dismiss State Contention 6) (Mar. 15, 2005) at 4 (unpublished) [hereinafter Order Dismissing State Contention 6].

a new seismic and structural analysis should be performed to qualify the Vermont Entergy cooling towers for the additional loads that will result from increasing the maximum power by 20%.'' LBP-04-28, 60 NRC at 573 (emphasis added). We noted that the focus of the contention is ''on the alleged need for Entergy to perform a seismic and structural analysis of the cooling towers under the proposed uprated conditions.'' *Id.* At oral argument on the initial admissibility of NEC Contention 4, its counsel essentially acknowledged that it is a contention of omission.[6] It was specifically on this basis that the Staff did not oppose the admission of NEC Contention 4.[7]

The analysis that NEC Contention 4 alleged ''should be performed'' has now been performed. Thomas Decl. ¶ 9; NRC Answer at 2. That analysis evaluated the cooling tower structure, taking dead load, snow and ice load, and seismic loading conditions into account, and served as the basis on which Entergy concluded that there is no need for structural modifications to the ACS cell or the adjacent cell. Thomas Decl. ¶¶ 10-11. Given that the contention was based on the ''need for Entergy to perform a seismic and structural analysis,'' now that Entergy has performed this analysis, the contention is moot. *See Duke,* CLI-02-28, 56 NRC at 383.

Admittedly, some of the language in NEC Contention 4 seems to support the proposition that it is not solely a contention of omission. For example, the first sentence of the contention alleges, in pertinent part, that: ''Entergy cannot assure seismic and structural integrity of the cooling towers under uprate conditions.'' LBP-04-28, 60 NRC at 580. But this phrase, read alone, is a broad and very unfocused complaint. Even the second sentence of NEC Contention 4 has certain qualitative aspects: ''At present the *minimum appropriate* structural analyses have apparently not been done.'' *Id.* (emphasis added). Nevertheless, in context, it is clear that NEC Contention 4 focused on the omission, not the quality, of any seismic and structural analysis of the cooling system under EPU conditions. This was inevitable, because at the time there was no such analysis, and therefore no way that NEC could review or challenge its adequacy.

Now however, NEC raises a number of alleged flaws in Entergy's seismic and structural analysis, claiming that they fall within the umbrella of NEC Contention 4. NEC Answer at 6-10. This is an effort to ''transform'' an admitted contention of omission into a broad series of disparate new claims and is not conducive to the fair and efficient management of this proceeding.[8] Expanding NEC Contention

---

[6] ''Judge Rubenstein: Is this an omission of analysis issue? Mr. Block: Yes.'' Tr. at 338.

[7] The Staff agreed that, ''[t]o the extent that [NEC's Contention 4] provides a basis to support NEC's assertion of a specific omission from the Application, the Staff does not oppose admission of this contention.'' NRC Staff Answer to Request for Hearing of New England Coalition (Sept. 29, 2004) at 17.

[8] *See* Order Dismissing State Contention 6 at 4.

4 to cover NEC's broad and conclusory criticisms of Entergy's seismic and structural analysis would leave this proceeding on vague and uncertain ground as to the scope and focus of NEC's complaint and the specific issues to be litigated. In addition, it would fail to ensure that there is at least some factual and legal foundation for the alleged claims, or to ensure that there is a genuine dispute on a material issue of law or fact. For these reasons, we accept NEC's own characterization of this contention as one of omission, and dismiss it as moot.[9]

To the extent that NEC has specific complaints regarding Entergy's new seismic and structural analysis that are within the scope of the EPU application[10] and that satisfy the contention requirements of 10 C.F.R. § 2.309, NEC may now seek leave to file new contentions. The Board slightly reformulated NEC Contention 4 when it was admitted, and its qualitative language provided some support for NEC's position that its remained viable even after Entergy submitted its seismic and structural analysis. Now that the contention is dismissed, if NEC moves for leave to file new or amended contentions challenging the adequacy of Entergy's seismic and structural analysis within 20 days of the date of this order, then the motion and contentions will be deemed timely for purposes of 10 C.F.R. § 2.309(f)(2)(iii). Any such motion must address the remaining factors in 10 C.F.R. § 2.309(f)(2), and, as is the case with all contentions, must also show that the contention meets the standard admissibility requirements of section 2.309(f)(1)(i)-(vi).[11]

---

[9] The Board finds it unnecessary to reach the summary disposition issue.

[10] *See* LBP-04-28, 60 NRC at 573 n.30 (''Whether Entergy's prior seismic or structural analyses of the cooling towers, basins, or fans are compliant with its *current* licensing basis is not relevant to this proceeding unless there is a clear and direct relationship to the alleged need for an analysis of these structures and systems under the *proposed* uprate conditions'').

[11] We do not rule here whether a new contention, meeting the requirements of 10 C.F.R. § 2.309(f)(2)(i)-(iii), must also meet the requirements of section 2.309(c). Certainly there is case law supporting that interpretation of the pre-January 2004 version of the regulations. We discussed this issue in Licensing Board Memorandum and Order (Admitting New Contention) (Jan. 11, 2005) at 4. We do rule however that, if filed within the Board's prescribed 20-day period, a motion for leave to file a new contention on Entergy's analysis will be deemed to satisfy 10 C.F.R. § 2.309(c)(1)(i).

III. CONCLUSION

For the foregoing reasons, NEC Contention 4 is dismissed as moot. It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD[12]

Alex S. Karlin, Chairman
ADMINISTRATIVE JUDGE

(by G. Paul Bollwerk for:)
Dr. Anthony J. Baratta
ADMINISTRATIVE JUDGE

(by G. Paul Bollwerk for:)
Lester S. Rubenstein
ADMINISTRATIVE JUDGE

Rockville, Maryland
September 1, 2005

[12] Copies of this Order were sent this date by Internet e-mail transmission to counsel for (1) Licensees Entergy Nuclear Vermont Yankee L.L.C. and Entergy Nuclear Operations, Inc.; (2) Intervenors Vermont Department of Public Service and New England Coalition of Brattleboro, Vermont; and (3) the Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Alan S. Rosenthal, Presiding Officer
Dr. Paul B. Abramson, Special Assistant

In the Matter of **Docket No. 40-8838-MLA-2**
(ASLBP No. 04-819-04-MLA)

U.S. ARMY
(Jefferson Proving Ground Site) **September 12, 2005**

MEMORANDUM AND ORDER
(Referring to Commission Reinstatement of Prior Proceeding)

Before us is the July 19, 2005 motion of the Department of the Army (Licensee) to dismiss as moot this materials license proceeding involving its Jefferson Proving Ground (JPG) site located in Madison, Indiana. As appears from their filings and the discussion at an August 24 telephone conference, the motion is supported by the NRC Staff and opposed by the Intervenor, Save the Valley, Inc. (Petitioner).

For the reasons that follow, we are: (1) *sua sponte* reinstating a conditionally dismissed prior proceeding concerned with the decommissioning of this site, (2) referring the reinstatement to the Commission for its consideration, and (3) holding the motion to dismiss the present proceeding in abeyance to await the outcome of the referral.[1]

[1] This proceeding was instituted prior to the February 13, 2004 effective date of the substantial revision of the Commission's Rules of Practice codified in 10 C.F.R. Part 2. *See* 69 Fed. Reg. 2182 (Jan. 14, 2004). The Commission not having directed otherwise, the proceeding thus remains subject to the provisions of the now-superseded Subpart L governing the adjudication of materials licensing matters. Accordingly, it continues to be before Judge Abramson and this presiding officer for determination.

I. BACKGROUND

This proceeding has had a long and tortured history. Except for the most recent developments, that history has been recounted in considerable detail in LBP-05-9, 61 NRC 218 (2005). For present purposes, the following summary should suffice.

1. Between 1984 and 1994, the Licensee conducted, under the auspices of an NRC materials license, accuracy testing of depleted uranium (DU) tank penetration rounds at its JPG site. Insofar as appears from the record before us, for some 5 years after the cession of testing the Licensee put nothing formally before the NRC Staff by way of a plan for the decommissioning of the site, on which a substantial quantity of DU munitions had accumulated as a result of the testing activities. Beginning in December 1999 — now almost 6 years ago — there was this sequence of events:

December 1999 — NRC Staff published a *Federal Register* notice of opportunity for hearing on the Licensee's recently presented application for a license amendment. The sought amendment called for the decommissioning of the JPG site in accordance with a plan that had been submitted to the Staff and accepted by it for full technical review.

March 2000 — Hearing request of Petitioner granted in LBP-00-9, 51 NRC 159. At the Licensee's request, proceeding placed in state of suspension pending Licensee's anticipated further interaction with the Staff with regard to the submitted decommissioning plan.

June 2001 — Licensee submitted an entirely new plan (denominated its ''final decommissioning/license termination plan'' (LTP)). Although regarding this plan as superseding the previously submitted one, the Staff refused to accept it for technical review until certain perceived deficiencies were corrected.[2]

June 2001 to October 2003 — LTP apparently was eventually accepted for technical review. In the course of that review, the Staff called upon the Licensee to perform certain additional site-specific sampling and modeling. Believing such an undertaking too dangerous because of the presence onsite of unexploded ordinance, in mid-2003 the Licensee withdrew the LTP. It then put before the Staff a new proposal calling for a 5-year, possession-only license (POLA) that would be renewable until such time as it became possible to perform the required site characterization safely. Accordingly, in October 2003 the Staff published a new *Federal Register* notice directed to the POLA

[2] For a recitation of some of the procedural problems that the initial rejection of the LTP presented, *see* LBP-01-32, 54 NRC 283 (2001). As a consequence of that order, the proceeding was continued in a state of suspension to await the LTP being developed to a level that would permit its adjudication.

request. The notice stated that the POLA proposal had already been accepted for technical review.

December 2003 — Proceeding on the LTP dismissed *without prejudice to its revival should the decommissioning of the site once again receive active NRC consideration at the Licensee's behest.* LBP-03-28, 58 NRC 437.

January 2004 — Petitioner's timely hearing request with regard to the POLA proposal granted, along with that party's unopposed motion to hold further proceedings in abeyance pending the completion of the technical review of the proposal. LBP-04-1, 59 NRC 27.

June 2004 — In response to our inquiry, the Staff advised that Licensee had been given until August 2004 to furnish additional information. The report added that, if it proved adequate, the information should enable the completion of the technical review and issuance of the safety evaluation report (SER) and environmental assessment (EA) on the POLA proposal by early March 2005.

October 2004 — Responding to a second request for a progress report, the Staff revealed that it was still in need of additional information to enable the completion of the technical review and the issuance of the SER and EA on the POLA proposal.

March 2005 — For a third time in a 9-month period, the Staff was called upon to provide information as to the status of the technical review of the POLA proposal. This time, we were told that, it not being clear to the Staff ''how the Licensee intends to proceed,'' pending clarification on that score the Staff could not provide ''an estimated issuance date for the SER and EA.''

2. Our dissatisfaction with this state of affairs prompted the issuance on March 31, 2005, of LBP-05-9, *supra,* in which we brought the Commission's attention to the foregoing history in the hope that, if in agreement with us that the then posture of the proceeding was unacceptable, some remedial action on its part might be forthcoming. On June 20, the Commission responded in CLI-05-13, 61 NRC 356 (2005). The Licensee was directed to provide a report to the Commission by July 11, 2005, ''detailing its past and planned efforts to gather the information necessary for the Staff to complete its technical and environmental reviews.'' *Id.* at 357. For its part, the Staff was to furnish the Commission by July 20, 2005, a report ''regarding the steps it plans to take to complete its review in light of the information provided by the Licensee.'' *Ibid.* If so inclined, the Petitioner could present its views on these matters in a filing to be received by July 30, 2005. *Id.* at 358.

In the course of providing these directions, the Commission noted its understanding that, on May 25, 2005, the Licensee had submitted to the Staff several

hundred pages of new information related to the license, which the Staff had taken to constitute a new license amendment request superseding the earlier application for a POLA. The Staff was instructed to include in its report a discussion regarding whether the newly submitted material would ''allow it to proceed with its evaluations related to this new license amendment application.'' *Id.* at 357.

The Licensee's July 7 report confirmed (at 10) that it was abandoning its POLA application and was now seeking instead ''NRC approval of an alternate schedule for submittal of a decommissioning plan . . . and one 5 year period for the execution of appropriate site characterization, with the Licensee presenting the NRC a definitive license termination plan at the end of that period.'' In that connection, the report alluded (*ibid.*) to the fact that the Licensee was now prepared to assume the safety risks associated with site characterization and also referred to a Field Sampling Plan that had accompanied the May 25 letter that had been sent to the Staff.

In its report, filed on July 20, the Staff told the Commission (at 2) that, on June 16, it had informed the Licensee that it was discontinuing review of the POLA proposal in view of the submittal of the ''superceding license amendment for an alternate schedule.'' The Staff further noted (*ibid.*) that, on June 27, it had published a notice in the *Federal Register* in which it had provided an opportunity to seek a hearing on the alternate schedule for decommissioning request that had been submitted on May 25.

3. It was in this setting that the Licensee filed its July 19 motion to dismiss the current proceeding on grounds of mootness. Both the motion and the Staff's support of it rest entirely on the fact that the POLA proposal has been withdrawn and yet another proposal put before the Staff for its approval. Given the marked difference between the sought POLA and what the Licensee now has in mind, Staff counsel maintained at the August 24 telephone conference (Tr. 17-18) that it had no alternative but to provide a fresh opportunity to seek a hearing to which the Petitioner must now respond if it wishes to continue to be heard with regard to the decommissioning of the JPG site. For its part, the Petitioner insists, *inter alia,* that the Licensee's motion elevates form over substance and that there is no good reason why it should not be able to continue its participation on decommissioning issues on the basis of its current party status.

II ANALYSIS

1. It is readily apparent that a grant of the motion to dismiss would have an impact upon just one entity — the Petitioner now before us. The time for seeking a hearing in response to the opportunity provided in the June 27, 2005 *Federal Register* has now expired without any other organization or person being

heard from.[3] (This silence is scarcely surprising. From the very inception of NRC adjudicatory proceedings concerned with the JPG site, this Petitioner has seemingly been regarded as adequately representing the interests of the Madison community in ensuring that the amassed DU munitions on the site do not pose an undue safety risk to its residents.) As a consequence, as the Staff sees it, the single practical effect of a dismissal of this proceeding will be to put the Petitioner to the trouble and expense of filing yet another hearing request, this one under the more stringent requirements imposed by the new Rules of Practice that took effect in February 2004. *See* note 1, *supra.*

Although the Staff would also have it that the imposition of this new obligation should not be found unduly burdensome by Petitioner, it cannot be gainsaid that at least some additional time and expense would be involved in the preparation of (and possibly the need to defend) yet another hearing request — whether it be under the old or the new Rules of Practice. In our view, given what it has been called upon to endure over the course of the past 5 1/2 years, there is every reason to avoid imposing any additional unnecessary burden upon this Petitioner, whether large or small.

Because 11 years have now elapsed since the testing activities terminated, one might reasonably have expected that, at this juncture, the persons represented by this Petitioner would have some clear indication as to precisely how the Licensee proposed to decommission the JPG site in their backyard. Indeed, we would think that such was the contemplation of the Commission regulations regarding decommissioning of sites on which activities were conducted under the aegis of NRC licenses of the stripe possessed by this Licensee. That, in this instance, such an indication has as yet not been forthcoming might not be attributable to fault on the Licensee's part. At the same time, however, what the Petitioner has experienced to this point appears to us plainly unacceptable and not to be compounded if such is avoidable.

On that score, we need not repeat all that was said last March in LBP-05-9, *supra,* in the context of the then apparent inability of the Staff to get information about the now-abandoned POLA proposal that it deemed necessary in order to complete its technical review of that proposal. As the brief historical review set forth above makes clear, before the development that now confronts it Petitioner had to come to grips with and respond to in sequence: the Licensee's first initial decommissioning plan; a revised and assertedly final such plan (LTP); and, because the Licensee concluded that it was unable safely to conduct the site characterization required by the Staff in its review of the LTP, the POLA. Now, the Licensee and Staff would have it that none of this history is of any

[3] Over the Staff's inexplicable objection, on August 22 the Commission extended to September 26, 2005, the time for Petitioner's response to the *Federal Register* notice. The Petitioner had requested the extension to that date because of the uncertainty of the future of the current proceeding.

present significance; that, irrespective of what might have transpired in the past, Petitioner has no choice but to file yet another hearing request. Moreover, neither the Licensee nor the Staff is able to provide assurance that the Licensee will not abandon at some future date the proposal currently on the table in favor of a materially different fourth one. Given its present stance, there seems little room for doubt that, were this to occur, the Staff would both publish a new *Federal Register* notice and insist that Petitioner respond to it. This notwithstanding the fact that the ultimate issue would not have changed since the day the very first such notice was published with regard to the JPG site: i.e., precisely what is to be done by way of decommissioning that site so that the health and safety of the members of the public in its vicinity are adequately protected.

2. At the August 24 conference, Staff counsel justified (Tr. 17-18) the publication of a new *Federal Register* notice on the obvious substantial difference between the POLA proposal and what is now contemplated by the Licensee. As he pointed out (Tr. 25), under the former for ''an indefinite period of time'' there would be no activities looking to decommissioning of the site. In contrast, as the Licensee's counsel observed (Tr. 8), the current proposal represented ''about [an] 180 degree turnaround'' in that it contemplated ''much more extensive testing, field sampling'' for the purpose of bringing ''this matter to closure with a restricted release to the [Licensee].''

It is equally apparent that the same marked difference does not exist between the new proposal and what was on the table in the form of decommissioning plans before the Licensee reached the conclusion, now rescinded, that further site sampling could not be done with an acceptable degree of safety. To be sure, the course of action that the Licensee now would follow does not conform precisely to what was provided in the LTP, just as the LTP did not conform precisely to the decommissioning plan that it replaced in June 2001. The fact remains, however, that once again affirmative measures are being taken looking to the decommissioning of the site in a reasonably finite time period.

As earlier noted, the December 2003 dismissal of the proceeding on the LTP in LBP-03-28, *supra,* was not unconditional but, rather, permitted revival should the decommissioning of the JPG site once again receive active NRC consideration at the Licensee's request. In our view, that is exactly what has now transpired. While LBP-03-28 left it to the Petitioner to seek a reinstatement of the dismissed proceeding, we construe the grounds assigned in its opposition to the motion now before us to represent an implicit request for such relief. Be that as it may, we surely have the authority to take such action *sua sponte* in circumstances where, as here, we find that course to be mandated in the interest of ensuring that all parties to an NRC adjudicatory proceeding are treated fairly.

3. For the reasons just assigned, we are reinstating the proceeding (Docket No. 40-8838-MLA) previously conditionally dismissed in LBP-03-28. Although confident that this is an appropriate outcome given the totality of the unusual circumstances presented in this matter, we are nonetheless mindful that the Commission also continues to have those circumstances before it in the form of the filings of the parties submitted in response to CLI-05-13, *supra.* It thus seems prudent to provide the Commission with an opportunity to determine whether our conclusion as to the appropriate course of action comports with its own. We are therefore referring our reinstatement ruling to it for its consideration.[4] Pending the outcome of that consideration, further action in the reinstated proceeding (including the calling upon the Petitioner to determine whether it wishes to modify the statement of areas of concern previously filed in the context of the LTP) will be held in abeyance. So, too, will be the pending motion to dismiss the present proceeding.

The proceeding (Docket No. 40-8838-MLA) that was conditionally dismissed in LBP-03-28, 58 NRC 437 ((2003) is hereby *reinstated* and this action *referred* to the Commission for its consideration. Pending the outcome of that consideration, further action both in the reinstated proceeding and on the motion to dismiss the proceeding in Docket No. 40-8838-MLA-2 will be *held in abeyance.*[5]

It is so ORDERED.

BY THE PRESIDING OFFICER[6]

Alan S. Rosenthal
ADMINISTRATIVE JUDGE

Rockville, Maryland
September 12, 2005

---

[4] The Commission might wish also to take this opportunity to consider a broader question: whether what the Licensee has and has not done since the licensed activity terminated in 1994 can be regarded as conforming to both the letter and the spirit of the regulations governing the decommissioning of sites such as that here-involved.

[5] We assume that, either *sua sponte* or on Petitioner's motion, the Commission will further extend the time for Petitioner's response to the June 27 *Federal Register* notice to await the outcome of the referral.

[6] Copies of this Order were sent this date by Internet electronic mail transmission to the counsel for the parties.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

E. Roy Hawkens, Presiding Officer
Dr. Richard F. Cole, Special Assistant
Dr. Robin Brett, Special Assistant

In the Matter of **Docket No. 40-8968-ML**
(ASLBP No. 95-706-01-ML)

HYDRO RESOURCES, INC.
(P.O. Box 777, Crownpoint,
New Mexico 87313) **September 16, 2005**

In this Phase II Decision, which resolves challenges by multiple intervenors to a license application by Hydro Resources, Inc. (HRI) to perform in situ leach (ISL) uranium mining at three sites in McKinley County, New Mexico, the Board finds that HRI has demonstrated that the Intervenors' challenges relating to cultural resources do not provide a basis for invalidating HRI's license.

RULES OF PRACTICE: LAW OF THE CASE

Pursuant to the law of the case doctrine, the decision of an appellate tribunal should ordinarily be followed in all subsequent phases of that case, provided that the particular question in issue was ''actually decided or decided by necessary implication.'' *Safety Light Corp.* (Bloomsburg Site Decontamination), CLI-92-9, 35 NRC 156, 159-60 & n.5 (1992).

RULES OF PRACTICE: LAW OF THE CASE

The law of the case doctrine — which is designed to promote repose and judicial economy — does not limit a tribunal's power (*Arizona v. California,*

460 U.S. 605, 618 (1983)), and it ''should not be applied woodenly in a way inconsistent with substantial justice'' (*United States v. Miller,* 822 F.2d 828, 832-33 (9th Cir. 1987)).

RULES OF PRACTICE: LAW OF THE CASE

A tribunal should — in a proper exercise of discretion — refrain from applying the law of the case doctrine where ''changed circumstances or public interest factors dictate.'' *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-27, 61 NRC 145, 154 (2004) (internal quotation marks omitted). Changed circumstances include a situation where, for example, intervening controlling authority makes reconsideration appropriate, or substantially different evidence is adduced at a subsequent stage of the proceeding. *See, e.g., In re Rainbow Magazine, Inc.,* 77 F.3d 278, 281 (9th Cir. 1996); *DeLong Equipment Co. v. Washington Mills Electro Minerals Corp.,* 990 F.2d 1186, 1196-97 (11th Cir.), *cert. denied,* 510 U.S. 1012 (1993); *United States v. Bell,* 998 F.2d 247, 251 (1st Cir. 1993); *Lyons v. Fisher,* 888 F.2d 1071, 1075 (5th Cir. 1989), *cert. denied,* 495 U.S. 948 (1990).

RULES OF PRACTICE: RETROACTIVE APPLICATION OF NEW LAWS

''The presumption against the retroactive application of new laws is an essential thread in the mantle of protection that the law affords the individual citizen.'' *Lynce v. Mathis,* 519 U.S. 433, 439 (1997); *accord Bowen v. Georgetown University Hospital,* 488 U.S. 204, 208 (1988). This principle, which seeks to limit the Sovereign's ability to make arbitrary changes in the law, finds expression in several provisions of our Constitution, including the Due Process Clause, which protects the public's interest ''in fair notice and repose that may be compromised by retroactive legislation.'' *Lynce,* 519 U.S. at 439-40 & n.12 (quoting *Landgraf v. USI Film Products,* 511 U.S. 244, 266 (1994). *See National Mining Association v. Department of Labor,* 292 F.3d 849, 860 (D.C. Cir. 2002) (''If a new regulation is substantively inconsistent with a prior regulation [or] prior agency practice, . . . it is retroactive as applied to pending claims''); *see also Martin v. Hadix,* 527 U.S. 343, 357-58 (1999) (quoting *Landgraf,* 511 U.S. at 270) (The ''inquiry into whether a [regulation] operates retroactively demands a common sense, functional judgment about 'whether the new provision attaches new legal consequences to events completed before its enactment.' This judgment should be informed and guided by 'familiar considerations of fair notice, reasonable reliance, and settled expectations.' '').

RULES OF PRACTICE: RETROACTIVE APPLICATION OF NEW LAWS

Because ''[r]etroactivity is not favored in the law,'' statutes and regulations ''will not be construed to have retroactive effect unless their language requires this result.'' *Bowen v. Georgetown Univ. Hosp.,* 488 U.S. at 208. In other words, new laws are presumptively construed as applying prospectively, and this presumption is only overcome when a clear expression of contrary intent is embodied in the statutory or regulatory text.

NATIONAL HISTORIC PRESERVATION ACT (NHPA): RETROACTIVE APPLICATION

The regulatory history of the National Historic Preservation Act (NHPA) persuasively suggests that the Advisory Council on Historic Preservation (ACHP) intended the regulatory revisions of January 2001 to be applied prospectively (65 Fed. Reg. 77,698, 77,703 (Dec. 12, 2000)), a conclusion that is consistent with the fact that the ACHP declared in December 2000 that the effective date of the regulations would be delayed until January 11, 2001 (*id.* at 77,698). *See Criger v. Becton,* 902 F.2d 1348, 1351 (8th Cir. 1990) (''a delayed effective date on a regulation . . . certainly is evidence that cuts against retroactive application'').

NATIONAL HISTORIC PRESERVATION ACT (NHPA): RETROACTIVE APPLICATION

It is well established that a congressional grant of rulemaking authority does not include the power to promulgate retroactive rules unless Congress expressly confers such power. *Bowen v. Georgetown Univ. Hosp.,* 488 U.S. at 208; *National Mining Ass'n v. Department of Labor,* 292 F.3d at 859. Absent evidence that Congress authorized the Advisory Council on Historic Preservation (ACHP) to promulgate retroactive regulations, the NHPA regulations may not be applied retroactively. *Cf.* 5 U.S.C. § 551(4) (Administrative Procedure Act defines ''rule'' as an agency statement of ''future effect'').

NATIONAL HISTORIC PRESERVATION ACT (NHPA): PHASED COMPLIANCE

That the NHPA regulations in effect in January 1998 permitted phased compliance with section 106 is a conclusion that is consistent with statute, regulations, case law, and administrative practice.

NATIONAL HISTORIC PRESERVATION ACT (NHPA): NRC STAFF REVIEW

Insensitivity to a tribal group does not, standing alone, violate the National Historic Preservation Act (NHPA). *Cf. Muckleshoot Indian Tribe v. United States Forest Service,* 177 F.3d 800, 807 (9th Cir. 1999) (that an agency ''could have been more sensitive to the needs of the Tribe'' does not, by itself, violate the NHPA). This is not to suggest that insensitivity by an agency official to tribal groups should be condoned. To the contrary, an agency official ''should be sensitive to the special concerns of Indian tribes in historic preservation issues'' (36 C.F.R. § 800.1(c)(2)(iii)).

NATIONAL HISTORIC PRESERVATION ACT (NHPA): NRC STAFF REVIEW

When the Staff affirmatively seeks comments from an entity regarding a particular conclusion, but the entity does not respond, the Staff may reasonably infer that the entity agrees with the conclusion. *See Immigration and Naturalization Service v. Lopez-Mendoza,* 468 U.S. 1032, 1043 (1984) (in civil proceedings, an administrative official is permitted to draw a reasonable ''inference from the silence of one who is called upon to speak'').

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) AND NATIONAL HISTORIC PRESERVATION ACT (NHPA): NRC STAFF REVIEW

The ''hard look'' required by NEPA is not to be equated with completion of the NHPA review. Although an agency may coordinate and, where practicable, integrate its NEPA and NHPA review efforts (*see* 10 C.F.R. § 51.70(a), 36 C.F.R. § 800.14(a)), the two statutes impose separate and distinct obligations. *See, e.g., Preservation Coalition, Inc. v. Pierce,* 667 F.2d 851, 859 (9th Cir. 1982). There is no requirement in NEPA, or in the NRC's regulations implementing NEPA (10 C.F.R. Part 51), to complete the NHPA review in order to satisfy the obligations imposed by NEPA.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA): AGENCY RESPONSIBILITIES

An agency satisfies its obligation under NEPA to take a ''hard look'' at the impacts a project will have on cultural resources when it engages in informed and reasoned decisionmaking that is guided by the objective of ''preserv[ing] important historic [and] cultural . . . aspects of our national heritage'' (42

U.S.C. § 4331(b)(4)). Specifically, an agency must reasonably (1) consider the historic and cultural resources in the affected area; (2) assess the impact of the proposed action, and reasonable alternatives to that action, on cultural resources; (3) disseminate the relevant facts and assessments for public comment; and (4) respond to legitimate concerns. *See generally Hughes River Watershed Conservancy v. Johnson,* 165 F.3d 283, 288 (4th Cir. 1999); *Citizens Against Burlington, Inc. v. Busey,* 938 F.2d 190, 194-96 (D.C. Cir.), *cert. denied,* 502 U.S. 994 (1991); *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 431 (2003).

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA): ''HARD LOOK'' REQUIREMENT

To litigate a NEPA claim that the Staff failed to take a ''hard look'' at a significant environmental question, an intervenor must allege with adequate support that the Staff ''unduly ignored or minimized pertinent environmental effects.'' *McGuire/Catawba,* CLI-03-17, 58 NRC at 431. Such an allegation is belied by evidence that shows the Staff devoted extensive discussion to such effects in the Environmental Impact Statement. *See id.*

PARTIAL INITIAL DECISION

(Phase II Cultural Resources Challenges to In Situ Leach Uranium Mining License)

I. INTRODUCTION

In November 1994, the NRC Staff issued a ''Notice of Opportunity for Hearing'' concerning an application by Hydro Resources, Inc. (HRI) to construct and operate an in situ leach (ISL) uranium mining project in New Mexico. In response, timely requests for hearing were filed by the Eastern Navajo Diné Against Uranium Mining, the Southwest Research and Information Center, Grace Sam, and Marilyn Morris [hereinafter referred to collectively as the Intervenors], asserting that HRI's license application had numerous defects and should not be granted. The then-Presiding Officer held the hearing requests in abeyance until the Staff completed its review of HRI's license application.

On January 5, 1998, the Staff granted HRI a 10 C.F.R. Part 40 materials license (SUA-1508) to perform ISL mining at the following four sites in McKinley County, New Mexico: Section 8 and Section 17 in Church Rock, and Crownpoint and Unit 1 in Crownpoint. Shortly thereafter, in May 1998, the then-Presiding

Officer granted the Intervenors' hearing requests, and this protracted litigation ensued.

Although HRI has held its license for nearly 8 years, it has not yet started mining operations at any of the four sites due, in part, to profitability concerns related to the fluctuating price of uranium. This litigation nevertheless has gone forward, focusing first — in what was characterized as Phase I — on issues specific to mining operations at Section 8, because HRI represented that this was the first section it would mine.

In February 2004, the then-Presiding Officer completed adjudicating the Intervenors' Phase I challenges to HRI's license (LBP-04-3, 59 NRC 84 (2004)). The Commission, on appeal, sustained the validity of HRI's license insofar as it relates to prospective mining operations at Section 8 (CLI-04-33, 60 NRC 581 (2004)).

This litigation then entered Phase II, which involves the Intervenors' challenges to HRI's license insofar as it authorizes mining at the other three sites. For efficiency, the Intervenors' challenges were grouped into the following four categories: (1) groundwater protection and restoration, and surety estimates; (2) cultural resources; (3) air emission controls; and (4) adequacy of environmental impact statement.

The instant decision resolves the issues embodied in the second category of Phase II challenges — i.e., cultural resources.[1] The Intervenors claim that HRI's license to perform ISL uranium mining at Section 17, Unit 1, and Crownpoint is invalid because the NRC Staff allegedly failed, in derogation of the National Historic Preservation Act and the National Environmental Policy Act, to consider the impact that ISL mining will have on cultural resources at the mining sites. For the reasons set forth below, I find — with the concurrence of Dr. Richard Cole and Dr. Robin Brett, who have been appointed as Special Assistants — that HRI has demonstrated that the Intervenors' challenges relating to cultural resources do not provide a basis for invalidating HRI's license.

II. BACKGROUND

The Intervenors contend that HRI's license to perform ISL uranium mining at Section 17, Unit 1, and Crownpoint is invalid. First, they argue that the license violates the National Historic Preservation Act, because the NRC Staff's

[1] On July 20, 2005, this Board issued a decision on the first category of Phase II challenges (groundwater protection and restoration, and surety estimates), concluding that the Intervenors' challenges did not provide a basis for invalidating HRI's license to perform ISL uranium mining at Section 17, Crownpoint, and Unit 1 (LBP-05-17, 61 NRC 77 (2005) (petition for review filed Aug. 9, 2005)).

phased compliance approach toward cultural resources review is impermissible and, in any event, the cultural resources reviews that the Staff has conducted to date are inadequate. Second, they argue that the license violates the National Environmental Policy Act, because the NRC Staff failed adequately to address cultural resources issues in the Final Environmental Impact Statement. To compass fully the issues raised by the Intervenors, as well as this Board's resolution of those issues, it is helpful to be acquainted with (1) the statutory and regulatory frameworks that underlie the Intervenors' arguments; (2) HRI's mining sites, and the cultural resources reviews that have been conducted at those sites; and (3) the relevant administrative proceedings in this case. These topics are addressed below.

A. The Relevant Statutory and Regulatory Frameworks

1. The National Historic Preservation Act and Its Implementing Regulations

In the National Historic Preservation Act (NHPA), Congress declared that preserving this Nation's historical heritage ''is in the public interest so that its vital legacy of cultural, educational, aesthetic, inspirational, economic, and energy benefits will be maintained and enriched for future generations of Americans'' (16 U.S.C. § 470(b)(4)). To effect this goal, Congress enacted NHPA section 106 (*id.* § 470f), which, as relevant here, requires a federal agency to consider the impact its granting of a license will have on property that is listed in, or eligible for being listed in, the National Register of Historic Places (*ibid.*), which is a registry for sites, structures, and objects that have historic significance (*id.* § 470a(a)(1)(A)). Section 106 states in relevant part (*id.* § 470f):

> [T]he head of any Federal department or independent agency having authority to license any undertaking shall, . . . prior to the issuance of any license, . . . take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register. . . .

In the NHPA, Congress created the Advisory Council on Historic Preservation (ACHP) and charged it with enforcing section 106 and promulgating implementing regulations (16 U.S.C. § 470s). These implementing regulations are in 36 C.F.R. Part 800.[2] They establish a procedure that requires an agency to: (1) consult with the State Historic Preservation Officer to identify historic properties

[2] Although these regulations were amended effective January 11, 2001 (*see* 65 Fed. Reg. 77,698 (2000)), we deal here with the regulations in effect in January 1998 when the NRC Staff granted HRI's license. *See infra* Part III.A.1.

within the licensed area (36 C.F.R. § 800.4);[3] (2) consult with the State Historic Preservation Officer to assess the potential adverse effects on historic properties of granting the license (*id.* § 800.5); and (3) create a plan to mitigate any potential adverse effect (*ibid.*). If the agency determines either that there are no historic properties within the licensed area or that such properties will not be affected by licensed activities, and if there is no timely objection to that determination, the license may be issued (*id.* §§ 800.4(d), 800.5(d)).

The regulations further provide that the section 106 procedures ''may be implemented by the Agency Official in a flexible manner reflecting differing program requirements, as long as the purposes of section 106 of the Act and these regulations are met'' (36 C.F.R. § 800.3(b)). To this end, the regulations permit ''phased compliance'' with section 106 that is ''consistent with the . . . schedule for the undertaking'' (*id.* § 800.3(c)). As the regulations state (*ibid.*) (emphasis added):

> *The Council does not interpret [the NHPA] . . . to prohibit phased compliance at different stages in planning.* The Agency Official should ensure that the section 106 process is initiated early in the planning stages of the undertaking, when the widest feasible range of alternatives is open for consideration. *The Agency Official should establish a schedule for completing the section 106 process that is consistent with the planning and approval schedule for the undertaking.*

2. The National Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 *et seq.,* requires that a federal agency ''take a 'hard look' at the environmental consequences'' of a major federal action before taking that action (*Baltimore Gas & Electric Co. v. Natural Resources Defense Council,* 462 U.S. 87, 97 (1983)). To demonstrate compliance with this standard, an agency generally prepares a ''detailed statement'' (42 U.S.C. § 4332(2)(c)) — i.e., an Environmental Impact Statement — which establishes that the agency has made a reasonable and good faith effort to consider the values NEPA seeks to protect. As relevant here, the

[3] The State Historic Preservation Officer ''coordinates State participation in the implementation of the [NHPA] and is a key participant in the section 106 process'' (36 C.F.R. § 800.1(c)(1)(ii)). An Indian tribe may participate in the process ''in lieu of the State Historic Preservation Officer with respect to undertakings affecting its lands'' (*id.* § 800.1(c)(2)(iii)). As will be discussed *infra,* in the instant case, the Staff has completed the NHPA review for Sections 8 and 17 at Church Rock, as well as for a section of property located at the Unit 1 site (Section 12) and a section of property located at the Crownpoint site (Section 24). The record indicates that Sections 8, 12, and 24 are state property over which the New Mexico State Historic Preservation Office exercises NHPA authority, and Section 17 is tribal land over which the Navajo Nation Historic Preservation Department exercises NHPA authority. *See infra* Part II.B.

agency's assessment of environmental impacts requires an assessment of historic and cultural resources. *See* 40 C.F.R. § 1502.16(g); *cf.* 10 C.F.R. Part 51.

B. HRI's Mining Sites, and the Staff's Inquiry into the Impact of ISL Mining on Cultural Resources at Those Sites

HRI's license, SUA-1508 (Intervenors' Exhibit A), authorizes it to perform ISL mining at four proximately clustered sites in McKinley County, New Mexico: Sections 8 and 17 near the town of Church Rock, and Crownpoint and Unit 1 near the town of Crownpoint.[4]

Sections 8 and 17 are adjacent properties about 6 miles north of the town of Church Rock, and they consist primarily of undeveloped range land (FEIS at 2-25 to 2-26, 3-55). Section 8 covers 160 acres, of which about 144 acres may be disturbed during mining construction and operation, and Section 17 covers 200 acres, of which about 180 acres may be disturbed (*id.* at 2-26, 3-55).

Crownpoint and Unit 1 are, respectively, on the edge of the town of Crownpoint and about 2 miles west thereof. The Crownpoint site covers 912 acres, of which about 638 acres may be disturbed during mining construction and operation (FEIS at 2-28). The Unit 1 site — which consists primarily of undeveloped range land — covers 1920 acres, of which about 1536 acres may be disturbed during mining construction and operation (*id.* at 2-26, 3-54).

HRI plans to develop and operate these four mining sites in phases over a 20-year period. In the mid-1990s, when it was applying for its license, HRI envisioned that during the first phase — i.e., the first 5-year period — it would

---

[4] HRI's ISL uranium mining process, briefly explained, will involve two principal steps. First, HRI will inject a leach solution called ''lixiviant'' — which is a mixture of groundwater charged with oxygen and bicarbonate — through a well into a targeted zone containing uranium oxide. The uranium oxide, which occurs as small mineral grains within a sandstone host rock, dissolves when it comes into contact with the lixiviant solution. HRI will also operate production wells located in a pattern around each injection well. The production wells create a reduced pressure in the mined region by withdrawing slightly more water from the ground than is injected, thus containing the horizontal spread of the pregnant lixiviant (i.e., the lixiviant that now contains dissolved uranium oxide), and causing it to flow toward the production wells where it is pumped to the surface. *See* NUREG-1508, ''Final Environmental Impact Statement To Construct and Operate the Crownpoint Uranium Solution Mining Project, Crownpoint, New Mexico,'' at 2-2 to 2-5 (Feb. 1997) [hereinafter FEIS].

The second step of the ISL mining process occurs after the pregnant lixiviant is pumped to the surface. HRI will pipe the pregnant lixiviant through columns of ion exchange resin, and the uranium oxide will attach to the resin. Upon leaving the ion exchanger, the now-barren lixiviant will be recharged as necessary with oxygen and bicarbonate, and it will then be reinjected into the ore zone to repeat the leaching cycle. When the ion exchange capacity of a column of resin is depleted, that column is taken offline and the uranium oxide is chemically stripped from the resin. The resulting uranium oxide slurry is filtered and dried to produce the finished product — uranium oxide concentrate, or yellowcake — which is packaged and stored for final shipment. *See* FEIS at 2-5 to 2-12.

(1) develop and operate mines at Sections 8 and 17 at Church Rock, (2) build a support facility on a portion of the Unit 1 site called Section 12, and (3) build a processing facility on a portion of the Crownpoint site called Section 24. *See* FEIS at 2-26 to 2-27; Attachment C to HRI Exhibit A at ii; Intervenors' Exhibit K at 1; Attachment S to NRC Staff Exhibit 1.

The Staff's NHPA inquiry formally began on October 2, 1996, when it sent a letter to the New Mexico State Historic Preservation Office (NMSHPO) requesting assistance in determining whether the proposed HRI ISL mining project ''would affect properties eligible for, or listed on the National Register of Historic Places, pursuant to Section 106 of the [NHPA]'' (Intervenors' Exhibit K at 1; *see also* NRC Staff Exhibit 1, at 3). The Staff explained that the mining project ''includes a large area of land and phased development over a 20-year period'' (Intervenors' Exhibit K at 1).

In light of HRI's plan to develop its mining sites in phases over a long period of time, the NMSHPO had ''expressed a preference for [conducting the NHPA review of] this project incrementally'' (Intervenors' Exhibit K at 1; *see also* NRC Staff Exhibit 4, at 7). The Staff therefore stated that the initial NHPA review would focus on the first 5 years of HRI's mining operations, which would consist of the mining sites at Sections 8 and 17, and the support and processing sites at, respectively, Section 12 at the Unit 1 site, and Section 24 at the Crownpoint site (Intervenors' Exhibit K at 1-2).

The Staff informed the NMSHPO that HRI had prepared cultural resource management plans that sought to avoid disturbing any cultural resources — a goal that is achievable in ISL mining, because the placement of ISL wells is ''flexible, and with some distance limitations, slant drilling practices can provide access to subsurface areas that are beneath sensitive surface features'' (Attachment D to NRC Staff Exhibit 1, at 2; *see also* Attachment G to NRC Staff Exhibit 1, at 1, 8-14; Attachment H to NRC Staff Exhibit 1, at 1, 6-11; HRI Exhibit A at 4). Additionally, HRI hired a cultural resource consultant who sought preliminary information about traditional cultural properties[5] from the Navajo, the Hopi, the Zuni, the Laguna, the Acoma, and the All Indian Pueblo Council, and HRI averred that a local ethnographer would thoroughly investigate this information (Intervenors' Exhibit K at 1-2). Finally, the NRC Staff advised the NMSHPO that HRI would notify these local tribal groups about the NHPA review process and give them the opportunity to participate (*id.* at 3).

On October 2, 1996, the NRC Staff sent letters about HRI's proposed ISL mining to: (1) the Navajo Nation Historic Preservation Department; (2) the Navajo

[5] A ''traditional cultural property'' is property that is eligible for inclusion in the National Register of Historic Places based on its ''association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community'' (FEIS at 3-67).

Nation's Crownpoint Chapter; (3) the Navajo Nation's Church Rock Chapter; (4) the Pueblo of Laguna; (5) the All Pueblo Indian Council; (6) the Pueblo of Acoma; (7) the Hopi Cultural Preservation Office; and (8) the Pueblo of Zuni Heritage and Historic Preservation Office. *See* Appendix C to FEIS. This letter included a copy of the October 2, 1996 consultation letter that the Staff sent to the NMSHPO, and it provided the tribal groups with a name, address, and telephone number of an NRC official for purposes of discussing the NHPA review (*see ibid.*).

Shortly thereafter, the Navajo Nation — through the Navajo Nation Historic Preservation Department (NNHPD) — assumed the consulting functions of a State Historic Preservation Office under the NHPA with respect to Section 17, which consists of tribal lands. *See supra* note 3; NRC Staff Exhibit 2; Attachment N to NRC Staff Exhibit 1, at 1. On October 31, 1996, the NNHPD stated its agreement with a phased NHPA review process that correlated to HRI's phased development plans (Appendix C to FEIS; *see also* NRC Staff Exhibit 4, at 7).

The Staff continued its consultations with the NNHPD and other tribal groups, apprising them of the status of the NHPA review process, HRI's cultural resource management plans, the surveys to be conducted by the archaeological research firm licensed by New Mexico and the Navajo Nation, HRI's procedures for identifying traditional cultural properties, and HRI's policy of ''total avoidance'' of cultural resources (Appendix C to FEIS, Letter from Joseph J. Holonich, Chief, Uranium Recovery Branch, to Dr. Alan S. Downer, NNHPD (Jan. 31, 1997)). The Staff requested ''any direction or advice about advancing the [NHPA] review process and comments about the intended or ongoing survey work'' (*id.* at 3). *See also, e.g.,* Attachments L and O to NRC Staff Exhibit 1.

In February 1997, the NRC Staff published the FEIS, which contained a general discussion of cultural resources in the region (FEIS at 3-65 to 3-68), as well as a tailored examination of historical activities and cultural resources at HRI's proposed mining sites for the past 12,000 years (*id.* at 3-68 to 3-73). Additionally, the FEIS described the ongoing cultural resource surveys at the mining sites (*id.* at 3-73 to 3-77) and HRI's ''avoidance policy'' that would prevent the disturbance of cultural resources (*id.* at 4-110). The FEIS concluded that ''the proposed project has minimal potential to result in significant impacts on cultural resources'' (*id.* at 4-112).

In April 1997, HRI sent the NRC Staff a cultural resources report authored by the Museum of New Mexico's Office of Archaeological Studies [hereinafter the MNM Report] for Sections 8, 17, and 12. The MNM Report noted the presence of archaeological sites at Sections 8 and 12 that were eligible for inclusion in the National Register of Historic Places, but found no traditional cultural property at any of the sites. *See* Attachment K to NRC Staff Exhibit 1, at 17-22, 122-23. On June 19, 1997, the NRC Staff forwarded copies of the MNM Report to the

NMSHPO, the NNHPD, and several tribal groups. *See* Attachment L to NRC Staff Exhibit 1.

On May 20, 1998, the NRC Staff sent a consultation letter to the NMSHPO for purposes of making a final NHPA determination regarding the effect of HRI's ISL mining operations on Sections 8 and 12 (Intervenors' Exhibit I at 1). The Staff informed the NMSHPO that it agreed with the MNM Report's conclusion that the archaeological sites identified therein were eligible for inclusion in the National Register of Historic Places (*ibid.*). The Staff further advised that it proposed to determine that HRI's undertakings on Sections 8 and 12 would have no effect on any historical site, because: (1) HRI agreed to erect fences around the sites to preclude intrusion during any ground-disturbing activity, and the fences would remain in place until after the reclamation process was concluded following completion of mining (Intervenors' Exhibit I at 2); (2) all ground-disturbing activities within the vicinity of the archaeological sites identified in the MNM Report would be monitored by an archaeologist, who would have authority to stop ground-disturbing activity if previously undetected subsurface cultural resources were identified (*ibid.*); and (3) ''adequate consultation with local traditional practitioners has occurred and no traditional cultural properties have been identified in or near Sections 8, 17, and 12'' (*ibid.*). The Staff sought the NMSHPO's concurrence on the proposed ''no effect'' finding, stating that ''[i]f your office so concurs, or does not otherwise submit any objections to the NRC Staff's proposed determination, then pursuant to 36 C.F.R. § 800.5(b), the Staff would consider the NHPA process to be concluded with respect to Sections 8 and 12'' (Intervenors' Exhibit I at 2-3). The Staff sent a copy of this letter to the NNHPD and numerous tribal groups (Attachments N and O to NRC Staff Exhibit 1).

On May 20, 1998, the NRC Staff also sent a consultation letter to the NNHPD for purposes of making a final NHPA determination regarding the effect of HRI's ISL mining operations on Section 17 (Attachment N to NRC Staff Exhibit 1, at 1). The Staff informed the NNHPD that it agreed with the MNM Report's conclusion that ''no historic properties (i.e., cultural properties as defined in the Navajo Nation Cultural Resources Protection Act) eligible for listing in the *National Register of Historic Places* or in the *Navajo Nation Register of Cultural Properties and Cultural Landmarks* are located within Section 17'' (*ibid.*). Having concluded that Section 17 contained no historic properties, the Staff advised the NNHPD that it considered the NHPA review process to be complete for that site, and it sought the NNHPD's approval for HRI to proceed with its operations (*id.* at 1-2).

The NMSHPO and the NNHPD concurred with the Staff's NHPA determinations for, respectively, Sections 8 and 12, and Section 17. *See* Attachments P and Q to NRC Staff Exhibit 1.

Finally, on May 13, 1999, the NRC Staff sent another consultation letter to the NMSHPO, this time for purposes of rendering a final NHPA determination regarding the effect of HRI's mining operations on Section 24 (Attachment S to NRC Staff Exhibit 1, at 1). Attached to the consultation letter was a letter dated April 29, 1998, by Dr. Eric Blinman (the primary author of the MNM Report), which concluded that (Attachment to Attachment S to NRC Staff Exhibit 1, at 2): (1) ''there are no current traditional uses . . . by the Navajo community'' in the relevant area of Section 24, and, accordingly, HRI's first-phase activities ''should not pose any constraint on current cultural practice''; and (2) ''there are no cultural resource issues associated with first phase developments at [Section 24] at the HRI Crownpoint facility.'' Based on Dr. Blinman's letter, the NRC Staff found that HRI's activities at Section 24 ''would have no effect'' on historic properties, and the Staff sought the NMSHPO's concurrence (Attachment S to NRC Staff Exhibit 1, at 2). The NRC Staff also sent a copy of this letter and its attachment to the NNHPD. *See* Attachment S to NRC Staff Exhibit 1.

The NMSHPO concurred with the Staff's ''no effect'' finding for Section 24. *See* Attachment U to NRC Staff Exhibit 1, at 2.

On July 8, 1999, the NRC Staff advised HRI that the NHPA review was concluded with respect to Sections 8 and 17 at Church Rock, Section 12 at Unit 1, and Section 24 at Crownpoint (*see* 36 C.F.R. §§ 800.4(d), 800.5(d)), and that HRI's mining operations could proceed ''to the extent authorized'' by HRI's license (Attachment W to NRC Staff Exhibit 1, at 1).

HRI's license contains a condition, License Condition (LC) 9.12, that (1) prohibits HRI from performing any construction or development activities at any site until the NRC Staff has completed an appropriate NHPA review for that site, and (2) ensures the protection of any newly discovered cultural artifacts. LC 9.12 states (Intervenors' Exhibit A at 4):

> Before engaging in any construction activity not previously assessed by the NRC, the licensee shall conduct a cultural resource inventory. All disturbances associated with the proposed development will be completed in compliance with the National Historic Preservation Act of 1966, as amended, and its implementing regulations (36 C.F.R. Part 800), and the Archaeological Resources Protection Act of 1979, as amended, and its implementing regulations (43 C.F.R. Part 7).
>
> In order to ensure that no unapproved disturbance of cultural resources occurs, any work resulting in the discovery of previously unknown cultural artifacts shall cease. The artifacts shall be inventoried and evaluated in accordance with 36 C.F.R. Part 800, and no disturbance shall occur until the licensee has received written authorization to proceed from the State and Navajo Nation Historic Preservation Offices.

C. The Administrative Proceedings in this Case Concerning Cultural Resources

1. Phase I[6]

Although HRI has neither begun mining operations nor announced a schedule for commencing such operations, it declared during the course of this litigation that it would eventually begin mining at Section 8. Accordingly, in an unpublished order issued in September 1998, the then-Presiding Officer granted HRI's request to bifurcate this litigation, focusing initially in Phase I on the Intervenors' challenges relating to Section 8 and the overall validity of the license, leaving those issues relating to mining at the other three sites (Section 17, Unit 1, and Crownpoint) open and subject to later litigation in Phase II. *See* CLI-01-4, 53 NRC 31, 40 (2001) (''[i]t is sensible to decide the most time-sensitive issues first, as the Presiding Officer did here when he examined Section 8-related issues initially'').

During Phase I, the Intervenors raised numerous challenges to the validity of HRI's license insofar as it authorizes mining operations at Section 8, and many of these challenges have been addressed by the Commission.[7] For present purposes, however, the only challenges that need be recounted are those in which the then-Presiding Officer and the Commission addressed issues implicating cultural resources.

From the outset, the Intervenors repeatedly have asserted that the NRC Staff's cultural resources review violated the NHPA and NEPA. For example, in January 1999, the Intervenors moved to stay the effectiveness of HRI's license, arguing that, because the NRC Staff issued the license before completing the NHPA review for all the prospective mining sites, HRI's mining-related activities posed a serious risk of irreparable harm to archaeological sites and traditional cultural properties. *See* LBP-98-5, 47 NRC 119, 120-21 (1998). The then-Presiding Officer denied the motion. He concluded that the Intervenors failed to satisfy the standards for obtaining a stay, because they had ''not demonstrated a legal or practical bar'' to a phased compliance approach, nor had they shown a ''threat of irreparable injury'' arising from this approach (*id.* at 125, 126). The Commission affirmed. *See* CLI-98-8, 47 NRC 314 (1998).

---

[6] This case is being litigated pursuant to the NRC's since-superseded procedural rules in 10 C.F.R. Part 2, Subpart L, which were amended in 2004. *See* 69 Fed. Reg. 2182 (Jan. 14, 2004). Because the new rules apply only to proceedings noticed on or after February 13, 2004, they do not apply here.

[7] *See, e.g.,* CLI-04-14, 59 NRC 250 (2004) (financial assurance plan); CLI-01-4, 53 NRC 31 (2001) (NEPA and environmental justice issues); CLI-00-12, 52 NRC 1 (2000) (groundwater, radioactive air emissions, technical qualifications); CLI-00-8, 51 NRC 227 (2000) (financial qualifications); CLI-99-22, 50 NRC 3 (1999) (NHPA and performance-based licensing issues).

Thereafter, the Intervenors — having failed in their efforts to stay the effectiveness of HRI's license — sought to have the license declared invalid on the grounds that it violated the NHPA and NEPA. *See* LBP-99-9, 49 NRC 136, 137 (1999). First, they argued that HRI's license violated the NHPA because (1) the phased NHPA review approach used by the Staff was unlawful, and (2) the Staff's NHPA review was not sufficiently thorough in any event (*ibid.*). Second, they argued that the license violated NEPA because the FEIS failed adequately to address impacts on cultural resources (*ibid.*). The then-Presiding Officer rejected these arguments. First, he ruled that HRI's phased approach to compliance with the NHPA was lawful (49 NRC at 142) (citing 36 C.F.R. § 800.3(c)), and, moreover, he found that the Staff's cultural resources review with regard to HRI's prospective mining operations at Section 8 and processing operations at Section 24 satisfied NHPA requirements (49 NRC at 140-43). The Presiding Officer likewise rejected the Intervenors' contention that the FEIS inadequately addressed cultural resource issues (*id.* at 143-44), ruling that this claim was ''without basis'' (*id.* at 143). The Commission affirmed. *See* CLI-99-22, 50 NRC 3 (1999).

In February 2004, the then-Presiding Officer completed adjudicating the Phase I issues (LBP-04-3, 59 NRC 84 (2004)), and the Commission, on appeal, sustained the validity of HRI's license insofar as it involves prospective mining operations at Section 8 (CLI-04-33, 60 NRC 581 (2004)), thus ending Phase I of this case.

2. Phase II

In Phase II of this case, the Intervenors challenge HRI's license insofar as it authorizes mining at Section 17, Unit 1, and Crownpoint. At this stage of their Phase II challenge, they argue that the license is invalid because it was issued in derogation of the dictates of the NHPA and NEPA regarding the protection of cultural resources. More specifically, the Intervenors contend that: (1) the NRC Staff's phased NHPA review approach violates the NHPA and, in any event, the Staff's NHPA review was inadequate; and (2) the FEIS fails to address cultural resources adequately, in violation of NEPA. *See* Intervenors' Written Presentation in Opposition to [HRI's] Application for a Materials License with Respect to Cultural Resources Issues (Apr. 28, 2005) [hereinafter Intervenors' Written Presentation].

HRI and the NRC Staff responded to these challenges with written presentations arguing that HRI's license complies with the cultural resources review requirements in the NHPA and NEPA. *See* HRI's Response in Opposition to Intervenors' Written Presentation Regarding Historic and Cultural Resource Preservation (June 17, 2005) [hereinafter HRI's Response]; NRC Staff's Response to Intervenors' Presentation on Cultural Resource Issues (June 24, 2005) [hereinafter NRC Staff's Response].

For the reasons set forth below, I conclude that HRI has met its burden of demonstrating that its license complies with the requirements of the NHPA and NEPA regarding cultural resources.

III. ANALYSIS

A. The Intervenors' Assertion That NRC Staff Issued HRI's License in Violation of the NHPA Lacks Merit

1. The Intervenors' Attack on the Staff's Phased Compliance Approach to the NHPA Is Barred by Law of the Case Doctrine

The Intervenors contend that the NRC Staff violated the NHPA in issuing HRI's license without first completing the section 106 cultural resources review for the entire project. A phased compliance approach to section 106 in this case, argue the Intervenors, is not permitted by the NHPA regulations. *See* Intervenors' Written Presentation at 11-12.

The law of the case doctrine poses an insuperable obstacle to this argument. *See* NRC Staff's Response at 13; HRI's Response at 20. Pursuant to law of the case doctrine, the decision of an appellate tribunal should ordinarily be followed in all subsequent phases of that case, provided that the particular question in issue was ''actually decided or decided by necessary implication'' (*Safety Light Corp.* (Bloomsburg Site Decontamination), CLI-92-9, 35 NRC 156, 159-60 & n.5 (1992)). However, this doctrine — which is designed to promote repose and judicial economy — does not limit a tribunal's power (*Arizona v. California,* 460 U.S. 605, 618 (1983)), and it ''should not be applied woodenly in a way inconsistent with substantial justice'' (*United States v. Miller,* 822 F.2d 828, 832-33 (9th Cir. 1987)). Thus, a tribunal should — in a proper exercise of discretion — refrain from applying this doctrine where ''changed circumstances or public interest factors dictate'' (*Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-27, 61 NRC 145, 154 (2004) (internal quotation marks omitted)). Changed circumstances include a situation where, for example, intervening controlling authority makes reconsideration appropriate, or substantially different evidence is adduced at a subsequent stage of the proceeding. *See, e.g., In re Rainbow Magazine, Inc.,* 77 F.3d 278, 281 (9th Cir. 1996); *DeLong Equipment Co. v. Washington Mills Electro Minerals Corp.,* 990 F.2d 1186, 1196-97 (11th Cir.), *cert. denied,* 510 U.S. 1012 (1993); *United States v. Bell,* 988 F.2d 247, 251 (1st Cir. 1993); *Lyons v. Fisher,* 888 F.2d 1071, 1075 (5th Cir. 1989), *cert. denied,* 495 U.S. 948 (1990).

In the instant case, there is no dispute that the former Presiding Officer and the Commission already considered the precise issue raised here by the Intervenors — i.e., whether the Staff may take a phased approach in conducting a cultural

resources review pursuant to the NHPA — and the Presiding Officer and the Commission resolved this issue in the affirmative (LBP-99-9, 49 NRC at 142, *aff'd,* CLI-99-22, 50 NRC at 12-13). As the Commission unambiguously stated (50 NRC at 13 n.37) (quoting CLI-98-8, 47 NRC at 323-24 (footnotes omitted):

> [W]e are not convinced by [Intervenors'] argument that the NRC and HRI are prohibited from taking a ''phased review'' approach to complying with the NHPA . . . . The statute itself contains no such prohibition, federal case law suggests none, and the supporting regulations are ambiguous on the matter, even when read in the light most favorable to [Intervenors].

In short, the Commission squarely concluded that ''phased compliance [with the NHPA] is acceptable under applicable law'' (CLI-99-22, 50 NRC at 13). The Intervenors are precluded by law of the case doctrine from resurrecting that issue unless they can show that changed circumstances counsel against the doctrine's application. As discussed below, the Intervenors are unable to make such a showing.

First, the Intervenors argue that the NHPA's recently revised regulations — which became effective January 11, 2001[8] — constitute a changed circumstance that counsels against applying law of the case doctrine, because the new regulations allegedly demonstrate that the phased compliance approach permitted by HRI's license is unlawful (Intervenors' Written Presentation at 12, 17). The new regulatory provision addressing phased compliance states in pertinent part: ''Where alternatives under consideration consist of corridors or large land areas, or where access to properties is restricted, the agency official may use a phased process to conduct identification and evaluation efforts'' (36 C.F.R. § 800.4(b)(2)). The Intervenors argue that this new regulation makes clear that where — as here — alternatives regarding large land areas are no longer under consideration because the operational sites have been selected, phased compliance is prohibited (Intervenors' Written Presentation at 12), and the entire NHPA review process must be completed prior to issuance of the license (*id.* at 18). Because the Staff failed, in alleged violation of the new regulations, to complete the NHPA review process for all the mining sites before issuing HRI's license, and because the review process remains incomplete, the Intervenors argue that the license is invalid, and that such a conclusion is not precluded by law of the case (*ibid.*).

---

[8] The NRC Staff notes that the NHPA's implementing regulations were also revised on June 17, 1999. *See* NRC Staff's Response at 13-14 & n.11 (citing 64 Fed. Reg. 27,044 (May 18, 1999)). Because the Intervenors' argument focuses on the revisions that became effective on January 11, 2001 (Intervenors' Written Presentation at 3, 4, 16 (citing 65 Fed. Reg. 77,698 (Dec. 12, 2000)), I limit my analysis to the most recent revisions.

This argument lacks merit. The Commission determined that the Staff's issuance of a license in January 1998 that permitted phased compliance with the NHPA was ''acceptable under applicable law'' (CLI-99-22, 50 NRC at 13). The Intervenors' invitation to revisit that determination in light of the new regulations founders on the fact that the new regulations are not entitled to retroactive application and, thus, are not relevant here.[9]

''The presumption against the retroactive application of new laws is an essential thread in the mantle of protection that the law affords the individual citizen'' (*Lynce v. Mathis,* 519 U.S. 433, 439 (1997); *accord Bowen v. Georgetown University Hospital,* 488 U.S. 204, 208 (1988)). This principle, which seeks to limit the Sovereign's ability to make arbitrary changes in the law, finds expression in several provisions of our Constitution, including the Due Process Clause, which protects the public's interest ''in fair notice and repose that may be compromised by retroactive legislation'' (*Lynce,* 519 U.S. at 439-40 & n.12 (quoting *Landgraf v. USI Film Products,* 511 U.S. 244, 266 (1994)).[10]

Because ''[r]etroactivity is not favored in the law'' (*Georgetown Univ. Hosp.,* 488 U.S. at 208), statutes and regulations ''will not be construed to have retroactive effect unless their language requires this result'' (*ibid.*). In other words, new laws are presumptively construed as applying prospectively, and this presumption is only overcome when a clear expression of contrary intent is embodied in the statutory or regulatory text. I find no such expression in the text of the new NHPA regulations. Nor does the history of the new regulations suggest that they were intended to be applied retroactively. To the contrary, the regulatory

---

[9] I emphasize that I need not, and do not, construe the new regulations. Rather, for the limited purpose of determining the applicability of the law of the case doctrine, I assume (without deciding) the correctness of the Intervenors' assertion that the phased compliance approach toward NHPA review in HRI's license is unlawful under the new regulations. *But cf.* HRI Exhibit A at 5, 8-10 (arguing that the new regulations do not proscribe phased compliance here); HRI Exhibit B at 6-7 (same); HRI Exhibit C at 8 (same). Notably, the Intervenors do not argue that the NHPA erects an immutable bar to phased compliance in all circumstances. To the contrary, they concede that phased compliance is ''often necessary'' on ''large and complex projects'' (Intervenors' Exhibit B at 13). *Cf.* NRC Staff Exhibit 1, at 13 (NRC Staff member observes that HRI's phased mining operation ''may fairly be viewed as a large and complex project'').

[10] Invalidating HRI's 1999 license on the ground that the Staff allegedly failed to comply with NHPA regulatory requirements that came into existence 3 years later unquestionably would constitute a retroactive application of the new regulations. *See National Mining Association v. Department of Labor,* 292 F.3d 849, 860 (D.C. Cir. 2002) (''If a new regulation is substantively inconsistent with a prior regulation [or] prior agency practice, . . . it is retroactive as applied to pending claims.''); *see also Martin v. Hadix,* 527 U.S. 343, 357-58 (1999) (quoting *Landgraf,* 511 U.S. at 270) (The ''inquiry into whether a [regulation] operates retroactively demands a common sense, functional judgment about 'whether the new provision attaches new legal consequences to events completed before its enactment.' This judgment should be informed and guided by 'familiar considerations of fair notice, reasonable reliance, and settled expectations.' '').

history persuasively suggests that the ACHP intended the regulations to be applied prospectively (65 Fed. Reg. at 77,703),[11] a conclusion that is consistent with the fact that the ACHP declared in December 2000 that the effective date of the regulations would be delayed until January 11, 2001 (*id.* at 77,698). *See Criger v. Becton,* 902 F.2d 1348, 1351 (8th Cir. 1990) (''a delayed effective date on a regulation . . . certainly is evidence that cuts against retroactive application'').

Moreover, it is well established that a congressional grant of rulemaking authority does not include the power to promulgate retroactive rules unless Congress expressly confers such power (*Georgetown Univ. Hosp.,* 488 U.S. at 208; *National Mining Ass'n,* 292 F.3d at 859). Here, the Intervenors have provided no evidence that Congress authorized the ACHP to promulgate retroactive regulations. Absent such evidence, the NHPA regulations may not be applied retroactively. *Cf.* 5 U.S.C. § 551(4) (Administrative Procedure Act defines ''rule'' as an agency statement of ''future effect'').

Under these circumstances, acceding to the Intervenors' request to disregard law of the case in order to apply the new regulations retroactively would implicate due process concerns, contravene congressional and administrative intent, and ignore principles of regulatory construction. This I decline to do. *See Curators of the University of Missouri* (TRUMP-S Project), CLI-95-1, 41 NRC 71, 102 & n.23 (1995) (refusing to apply new Commission regulations retroactively to an already-pending license application).

Nor do I accept the Intervenors' invitation to disregard law of the case in light of several judicial decisions that allegedly ''make clear that . . . [HRI does] not qualify for phased compliance'' (Intervenors' Written Presentation at 12). The decisions on which the Intervenors rely (*id.* at 14) — *Mid States Coalition for Progress v. Surface Transportation Board,* 345 F.3d 520 (8th Cir. 2003), and *Pit River Tribe v. Bureau of Land Management,* 306 F. Supp. 2d 929 (E.D. Cal. 2004) — are inapposite. Unlike this case, both those cases involved *prospective* application of the *new* NHPA regulations. The Intervenors' reliance on those decisions is tantamount to arguing that the new regulations should be applied retroactively. For the reasons stated above, that argument is not tenable.[12]

---

[11] In response to public comments inquiring about the impact of the new regulations on agreements regarding program alternatives that were executed before the effective date of the new regulations, the ACHP declared that ''[s]uch agreements are still valid and will continue to be in effect according to their terms'' (65 Fed. Reg. at 77,703).

[12] Relying on *Mid States Coalition for Progress,* the Intervenors state that the Staff, in lieu of completing the NHPA review for the entire project prior to issuing the license, might have developed a Programmatic Agreement in consultation with the ACHP (Intervenors' Written Presentation at 14-16). ''Since the NRC Staff has failed to comply fully with the requirements of the NHPA and has not completed the alternative Programmatic Agreement,'' the Intervenors argue that HRI's license

(Continued)

Finally, the Intervenors argue that the law of the case doctrine does not preclude a conclusion that the regulations bar phased compliance here, because there is no material difference between the new and old regulations in their treatment of phased compliance. The new regulations, assert the Intervenors, simply clarify what the old regulations already provided, namely, that phased compliance in the circumstances of this case is not permissible. In support of this argument, the Intervenors point to regulatory history stating that the new regulations ''retained the core elements of the section 106 process that have been its hallmark since 1974'' (Intervenors' Written Presentation at 17) (quoting 65 Fed. Reg. at 77,699). Additionally, the Intervenors aver that:

> [The] *Highlights of Changes* section of the new rule further clarifies that the ACHP does not view the addition of 36 C.F.R. § 800.4(b)(2) [the regulatory provision addressing phased compliance] as a ''major change'' as it is not described in that section. Thus, one is left to assume that the ACHP considers the addition of [section 800.4(b)(2)] a ''technical or informational edit.''

Ibid. Thus, according to the Intervenors, the issuance of HRI's license is invalid under the new regulations, and because there is no significant difference between the new and old regulations in their treatment of phased compliance, HRI's license is perforce invalid under the old regulations (*id.* at 17-18).

This argument is unavailing. If — as the Intervenors assert — the new regulations dictate that HRI is ineligible for phased compliance, then the new regulations are — contrary to the Intervenors' contention — manifestly different than the old regulations that the Commission construed and applied in its 1999 decision. In that decision, the Commission examined the former regulatory language, which permitted ''phased compliance'' that is ''consistent with the . . . schedule for the undertaking'' (36 C.F.R. § 800.3(b)), and the Commission concluded that this language — even read in the light most favorable to the Intervenors — did not prohibit phased compliance for HRI's mining project (CLI-99-22, 50 NRC at 13 n.37).[13] The Commission observed that phased compliance was not prohibited by the NHPA (50 NRC at 13 n.37; CLI-98-8, 47 NRC at 323 & n.15), nor was it prohibited by case law (CLI-99-22, 50 NRC at 13 n.37). The Commission also noted case law that supported phased compliance

---

was ''issued in violation of the NHPA'' (*id.* at 16). This argument lacks merit because: (1) the new NHPA regulations applied in *Mid States Coalition for Progress* do not apply retroactively to this case; and (2) under law of the case doctrine, the Staff's phased compliance approach in this case did not violate the NHPA.

[13] Notably, the Intervenors' own witness, Dr. Thomas King, concedes that the regulatory language in 36 C.F.R. § 800.3(b) did not prohibit phased compliance for HRI's mining project. *See* Intervenors' Exhibit B at 16-17 (stating that the language in section 800.3(b) ''permit[ted] readers to interpret such [phased compliance] as acceptable'').

with the NHPA review process. *See* CLI-98-8, 47 NRC at 324 n.16 (citing *City of Grapevine v. Department of Transportation,* 17 F.3d 1502, 1508-09 (D.C. Cir.), *cert. denied,* 513 U.S. 1043 (1994) (rejecting claims that completion of the NHPA review process was required prior to agency approval of a project, where the agency's approval was conditioned on its subsequent completion of that process).[14] Moreover, the administrative record in this case revealed that, under the old regulations, ''[p]hased Section 106 review [was] a common practice'' (LBP-98-5, 47 NRC at 124), and the phased compliance approach proposed for HRI's project was endorsed by both the New Mexico State Historic Preservation Office and the Navajo Nation Historic Preservation Department (*ibid.*).

The Commission thus concluded that HRI's phased compliance with NHPA was lawful (CLI-99-22, 50 NRC at 13). That conclusion — which was consistent with statute, regulations, case law, and administrative practice — was eminently reasonable.

If, as the Intervenors contend, a different conclusion is required by the new regulations (*but see supra* note 9), then the new regulations have changed the legal landscape, which means they cannot be given retroactive effect absent clear evidence that (1) Congress authorized NHPA to issue retroactive regulations, *and* (2) NHPA intended the regulations to be applied retroactively. Because neither of these conditions is satisfied, the new regulations are not relevant to this proceeding.

The new regulations do not, therefore, constitute a circumstance that militates against applying law of the case doctrine. And pursuant to that doctrine, the Intervenors' challenge to the Staff's phased compliance approach must be rejected, because — as the Commission already has adjudged — ''phased compliance [with the NHPA in this case] is acceptable under applicable law'' (CLI-99-22, 50 NRC at 13).

2. The Intervenors' Assertion That the Staff's NHPA Review for Sections 17 and 12 Was Inadequate Under the Old Regulations Lacks Merit

The Intervenors argue that, even if the new regulations do not apply here and even if phased compliance was permissible, the cultural resources review conducted by the Staff for Sections 17 and 12 was inadequate, thus rendering

---

[14] *See also Walsh v. United States Army Corps of Engineers,* 757 F. Supp. 781 (W.D. Tex. 1990) (district court, in denying a motion for preliminary injunction, holds that federal agency did not violate NHPA by issuing a permit authorizing construction of a dam and reservoir prior to completing NHPA review).

HRI's license invalid (Intervenors' Written Presentation at 20). This argument lacks merit.[15]

Preliminarily, it should be noted that, during Phase I of this litigation, the Intervenors argued that the Staff's performance of the NHPA review for Section 8 (the prospective mining site) and Section 24 (the processing site) was inadequate. The former Presiding Officer disagreed. In the course of analyzing the adequacy of the Staff's NHPA review, the Presiding Officer found that the Staff: (1) performed NHPA planning that ''complied step-by-step with regulatory directions'' (LBP-99-9, 49 NRC at 140); (2) ''followed a [statutory review] process that is authorized by the regulations'' (*ibid.*); (3) adequately identified historic properties considered eligible for inclusion in the National Register of Historic Places and considered the effect of Section 8 mining operations on such properties in consultation with the affected tribal groups (*id.* at 141-42); and (4) fulfilled its NHPA responsibilities after obtaining the concurrence of the NMSHPO and NNHPD that the mining would have ''no effect'' on any cultural resources (*ibid.*). In short, the Presiding Officer concluded that the NRC Staff complied with NHPA requirements ''with respect to [Section 8 and] the portion of the Crownpoint site [Section 24] on which effluents from the Church Rock site will be treated'' (*id.* at 143). The Commission affirmed (CLI-99-22, 50 NRC at 6).

Because the Staff's procedural methodology for conducting its NHPA review for Sections 8 and 24 was identical *in omnibus* with the procedural methodology of its NHPA review for Sections 17 and 12 (*supra* Part II.B), one might logically conclude that, because the cultural resources review for Sections 8 and 24 complied with the NHPA, the cultural resources review for Sections 17 and 12 likewise complied with the NHPA. The following analysis confirms the correctness of this conclusion.

a. The Intervenors argue that the NRC Staff's NHPA consultation with tribal groups was inadequate. In support of this argument, they point to a letter dated February 22, 1996, that HRI sent to several tribal groups that (Intervenors' Exhibit L): (1) informed the tribal groups that HRI intended to engage in ISL uranium mining at the Church Rock and Crownpoint sites; (2) advised them of its cultural resources management plan; and (3) requested that they notify HRI of traditional

[15] There is a substantial question as to the correctness of the Intervenors' claim that HRI's license must be invalidated if the Staff's NHPA review for Sections 17 and 12 was invalid. In this regard, it must be remembered that the Commission already sustained the validity of the Staff's NHPA review for Sections 8 and 24 in Phase I of this litigation (*supra* Part II.C.1). Because the Commission has ruled that (1) HRI may proceed with mining operations at Section 8, and (2) phased compliance with the NHPA is permissible, it would seem that — if it were determined that the NHPA review for Sections 17 and 12 was inadequate — the proper remedy would be to direct that the deficiencies be corrected rather than to direct that the license be invalidated. I need not reach this remedial issue, however, because I find that the Staff's NHPA review was adequate.

cultural properties that might be located in or near the proposed mining sites. The Intervenors complain that this ''form letter'' from HRI was an ''insult[]'' to Native American sovereignty and an inadequate attempt by the NRC Staff to initiate the NHPA process, because it was ''sent on HRI letterhead,'' it ''[made] no mention of the involvement of the NRC Staff,'' and it failed to mention the initiation of the ''section 106 consultation under the NHPA'' (Intervenors' Written Presentation at 21-22).

The Intervenors' complaint fails to state a colorable claim for two alternative reasons. First, even assuming *arguendo* that a tribal group would perceive HRI's letter as an ''insult'' to its sovereignty, case law indicates that insensitivity to a tribal group does not, standing alone, violate the NHPA. *Cf. Muckleshoot Indian Tribe v. United States Forest Service,* 177 F.3d 800, 807 (9th Cir. 1999) (that an agency ''could have been more sensitive to the needs of the Tribe'' does not, by itself, violate the NHPA).[16]

Second, and more fundamentally, the Intervenors' complaint is based on the erroneous premise that HRI's letter of February 22, 1996, represented the Staff's initiation of the NHPA consultation process with the tribal groups. Contrary to the Intervenors' understanding, the Staff initiated its NHPA consultation process with tribal groups in a letter dated October 2, 1996, that was sent on NRC letterhead from the NRC Acting Chief of the Uranium Recovery Branch to the NNHPD, the Pueblo of Zuni Heritage and Historic Preservation Office, the Hopi Cultural Preservation Office, the Pueblo of Acoma, the Pueblo of Laguna, the All Pueblo Indian Council, the Crownpoint Chapter of the Navajo Nation, and the Church Rock Chapter of the Navajo Nation (*see* Appendix C to FEIS; NRC Staff Exhibit 1, at 3-4). In this consultation letter, the NRC (Appendix C to FEIS): (1) advised the tribal groups that it was reviewing HRI's application for a license to conduct ISL mining; (2) informed them that it was initiating the section 106 review process under NHPA; (3) acknowledged their potential interest in the section 106 consultations; and (4) provided a name, address, and telephone number for purposes of Staff consultation.

Additionally, in this consultation letter, the Staff provided the tribal groups with a copy of the NHPA consultation letter it sent to the NMSHPO, which included a comprehensive discussion of the section 106 process and how HRI and the Staff proposed to comply with NHPA requirements (Appendix C to FEIS; Intervenors' Exhibit K). This letter was accompanied by eight attachments, including: (1) maps of the mining sites; (2) a summary of the proposed project; (3) a Cultural Resources–Environmental Assessment and Management Plan for

[16] This is not to suggest that insensitivity by an agency official to tribal groups should be condoned. To the contrary, an agency official ''should be sensitive to the special concerns of Indian tribes in historic preservation issues'' (36 C.F.R. § 800.1(c)(2)(iii)). In the instant case, I find that the NRC Staff complied with this regulatory admonition.

HRI's proposed ISL mining operations at Crownpoint, Unit 1, and Church Rock; (4) an Archaeological Protection Program for the Church Rock Mine-Survey and Preservation of the Archaeological Antiquities; and (5) a Bibliography of Archaeological Surveys and Cultural Resource Management Plans for the sites. *See* Attachments C-J to NRC Staff Exhibit 1.

Plainly, the NRC Staff's consultation letter to the tribal groups suffers none of the alleged flaws that the Intervenors ascribe to HRI's letter of February 22, 1996.

b. The Intervenors also challenge the adequacy of the Staff's consultation with tribal groups on the alleged ground that — aside from HRI's ''form letter'' of February 22, 1996 — tribal groups were neither consulted nor given an opportunity to participate in the NHPA review process (*see* Intervenors' Written Presentation at 21-22). The record refutes this assertion.[17]

For example, by letter dated October 31, 1996, the NNHPD — which exercised NHPA consultation functions for Section 17 on behalf of the Navajo Nation (*supra* note 3; Attachment N to NRC Staff Exhibit 1; NRC Staff Exhibit 2) — responded to the NRC Staff's initial consultation letter, agreeing to a phased NHPA review approach and acknowledging that HRI's archaeological contractor, in consultation with the NNHPD, would be responsible for identifying traditional cultural properties (Appendix C to FEIS).

On January 31, 1997, the Staff sent the NNHPD another consultation letter that summarized the NHPA review process, HRI's cultural resource management plans, the surveys to be conducted by the archaeological research firm licensed by New Mexico and the Navajo Nation, HRI's procedures for identifying traditional cultural properties, and HRI's policy of ''total avoidance'' of cultural resources. *See* Appendix C to FEIS. The Staff also sent this letter to the Pueblo of Zuni Heritage and Historic Preservation Office, the Hopi Cultural Preservation Office, the Pueblo of Acoma, the Pueblo of Laguna, the All Pueblo Indian Council, and the Navajo Nation Crownpoint and Church Rock Chapters, and it requested ''direction or advice about advancing the [NHPA] review process and comments about the intended or ongoing survey work'' (*id.* at 3).

In April 1997, HRI completed its cultural resources report — i.e., the MNM Report, which was prepared by the Museum of New Mexico's Office of Archaeological Studies — for Sections 8, 17, and 12 (Attachment K to NRC Staff Exhibit

[17] The Intervenors — by characterizing HRI's letter to the tribal groups as a ''form letter'' (Intervenors' Written Presentation at 22) — appear to suggest that letters relating to the NHPA review process are deficient based solely on the fact that they are substantively identical. However, as HRI witness Dr. Eric Blinman observes, the letters criticized by the Intervenors had the same purpose and, hence, the same content: ''[i]t would [have been] irresponsible to provide different information to each tribe, or to simply make cosmetic changes so that the letter would appear 'different' '' (HRI Exhibit A at 4).

1). The MNM Report was grounded on numerous research materials, including a report prepared by Ernest Becenti, Sr., who had been a Navajo traditional practitioner for over 30 years and also had been president of the Navajo Nation Church Rock Chapter (*id.* at 18). Mr. Becenti's report — which was based on interviews and a ''walking tour of the private lands, Navajo Nation Trust lands, Navajo allotment lands, and Bureau of Land Management lands within the project areas of Church Rock and Crownpoint'' (*ibid.*) — concluded that ''no significant sacred and traditional sites were found'' (*ibid.*). Janet Spivey — an ethnohistorian for the Museum of New Mexico Office of Archaeological Studies who assisted in the preparation of the MNM Report (*ibid.*) — confirmed the veracity of Mr. Becenti's report and augmented his investigations with additional material, including numerous interviews of ''knowledgeable Navajo traditional practitioners'' and tribal leaders ''representing all the involved communities'' (*ibid.*).[18] No traditional cultural properties were identified (Attachment C to HRI Exhibit A at 159, 160). As to Section 17, the MNM Report concluded that nothing was ''eligible for inclusion in the *National Register of Historic Places*'' (Attachment K to NRC Staff Exhibit 1, at 123; *see also* Attachment N to NRC Staff Exhibit 1, at 1). As to Sections 8 and 12, the MNM Report concluded that, notwithstanding the existence of historic sites, HRI's operations could be conducted with no effect on such sites (*see* Attachment C to HRI Exhibit A at 159-61; Intervenors' Exhibit I at 1).

On June 19, 1997, the NRC Staff sent the MNM Report to the NNHPD, the Pueblo of Zuni Heritage and Historic Preservation Office, the Hopi Cultural Preservation Office, and the NMSHPO, advising them that the MNM Report would serve as a basis for the Staff's NHPA determination and soliciting their comments. Additionally, by letters dated June 18, 1997, the NRC Staff offered copies of the MNM Report for review to the All Pueblo Indian Council, the

[18] The individuals interviewed by the Museum of New Mexico's ethnohistorian, Ms. Spivey, represent — both individually and collectively — a rich repository of traditional and cultural tribal knowledge. For example, she interviewed a 77-year-old Native American traditional practitioner who had been practicing for nearly half a century, a 75-year-old traditional practitioner who lived in the area his entire life, a 67-year-old traditional practitioner who has been practicing for 25 years, a 67-year-old traditional practitioner who learned traditional practice from his grandmother, and an 84-year-old traditional practitioner. Additionally, she interviewed numerous tribal leaders and officials, including the Navajo Nation Smith Lake Chapter President, the Navajo Nation Pinedale Chapter Vice President, the Navajo Nation Little Water Chapter President, Vice President, Treasurer, Manager, and former Secretary, the Navajo Nation Crownpoint Chapter President, the Navajo Nation Church Rock Chapter President, and the Navajo Nation Dalton Pass Chapter President. *See* Attachment K to NRC Staff Exhibit 1, at 18-22, 122-23, 154. None of the individuals interviewed by Ms. Spivey expressed a concern that HRI's proposed mining project would interfere with any known traditional cultural activities. *See id.* at 122-23, 154; *see also* HRI Attachment C to Exhibit A at 159, 160.

Pueblo of Acoma, and the Pueblo of Laguna. *See* Attachment L to NRC Staff Exhibit 1; *see also* NRC Staff Exhibit 3, at 5.

On May 20, 1998, the NRC Staff sent consultation letters to the NMSHPO and NNHPD for purposes of making a final NHPA cultural resources review determination regarding Sections 8, 12, and 17. *See* Intervenors' Exhibit I; Attachment N to NRC Staff Exhibit 1. As to Sections 8 and 12, the Staff sought the NMSHPO's concurrence on a proposed NHPA finding of ''no effect,'' stating that ''[i]f your office so concurs, or does not otherwise submit any objections . . . , then pursuant to 36 C.F.R. § 800.5(b), the Staff would consider the NHPA process to be concluded'' (Intervenors' Exhibit I at 2-3). As to Section 17, the Staff sought the NNHPD's approval for HRI to proceed with its operations, based on the Staff's proposed NHPA finding that ''no historic properties (i.e., cultural properties as defined in the Navajo Nation Cultural Resources Protection Act) eligible for listing in the *National Register of Historic Places* or in the *Navajo Nation Register of Cultural Properties and Cultural Landmarks* are located within Section 17'' (Attachment N to NRC Staff Exhibit 1, at 1).

Additionally, on May 20, 1998, the Staff sent consultation letters to the same seven tribal groups previously consulted (i.e., Pueblo of Zuni Heritage and Historic Preservation Office, the Hopi Cultural Preservation Office, the Pueblo of Acoma, the Pueblo of Laguna, the All Pueblo Indian Council, and the Navajo Nation's Crownpoint and Church Rock Chapters), seeking comments regarding the Staff's proposed NHPA determinations. *See* Attachment O to NRC Staff Exhibit 1.

The NNHPD and the NMSHPO concurred with the Staff's proposed NHPA determinations (Attachments P and Q to NRC Staff Exhibit 1), and no tribal group opposed or otherwise commented on those determinations (NRC Staff Exhibit 1, at 9).

Finally, on May 13, 1999, the NRC Staff sent a consultation letter to the NMSHPO seeking concurrence on a proposed NHPA determination that HRI's operations would have ''no effect'' on historic properties at Section 24. *See* Attachment S to NRC Staff Exhibit 1. The Staff also sent a copy of this letter to the NNHPD (*ibid.*). On June 17, 1999, the NMSHPO concurred with the Staff's ''no effect'' determination (Attachment U to NRC Staff Exhibit 1, at 2). There is no record evidence that the NNHPD opposed or otherwise commented on that determination.

The above evidence persuasively demonstrates that — contrary to the Intervenors' assertion — tribal groups were adequately consulted during the NHPA review process. In particular, the Staff (1) closely coordinated its NHPA review with the NNHPD, which — on behalf of the Navajo Nation — performed the consultation function of the State Historic Preservation Office, (2) obtained relevant NHPA information from numerous tribal leaders and traditional practitioners, and (3) conscientiously provided tribal groups with updated information regarding

the cultural resources review, as well as a meaningful opportunity to participate in the review process. I find that the Staff satisfied the NHPA's consultation requirements for Sections 17 and 12. *See* 36 C.F.R. §§ 800.1(c)(2)(iii), 800.4(d), 800.5(b).[19]

c. Contrary to the Intervenors' contention (Intervenors' Written Presentation at 22, 24), the decision in *Pueblo of Sandia v. United States,* 50 F.3d 856 (10th Cir. 1995), does not vitiate the conclusion that the NHPA review in this case has been adequate. In *Pueblo of Sandia,* the Tenth Circuit held that the Forest Service violated the NHPA, because its efforts to identify historic properties in Las Huertas Canyon in the Cibola National Forest ''were neither reasonable nor in good faith'' (50 F.3d at 857). The facts there, however, are distinguishable in material respects from the instant facts.

First, in *Pueblo of Sandia,* the court held that the Forest Service acted unreasonably when it failed to investigate the existence of traditional cultural properties, even though it knew that the affected sites probably contained such properties (*id.* at 860-62). In contrast, the investigatory efforts by HRI and the Staff in the instant case to identify historic properties on Sections 17 and 12 were reasonable and thorough (*supra* Part III.A.2). Second, in *Pueblo of Sandia,* the court held that the Forest Service failed to act in good faith, because it improperly withheld material information from the State Historic Preservation Officer, thereby precluding him from making an informed decision regarding the existence of traditional cultural

---

[19] The Intervenors assert that the NHPA consultations in this case were especially inadequate with regard to the Hopi, Laguna, Acoma, and Zuni Tribes (Intervenors' Written Presentation at 22). This assertion is baseless. It cannot be reconciled with the record evidence showing that the Staff kept these tribes apprised of the NHPA review process and provided them with a continuing opportunity to participate in that process. *See, e.g.,* Attachments L and O to NRC Staff Exhibit 1; Appendix C to FEIS at 3. Additionally, the Staff's consultation efforts were supplemented by HRI's efforts to consult with the interested tribes regarding cultural resources. *See* 36 C.F.R. § 800.1(c)(1)(i) (in performing NHPA review, agency may ''use the services of . . . applicants, consultants, or designees''). As a Staff member explained (NRC Staff Exhibit 1, at 10):

> HRI sent requests to the Interested Tribes in letters dated February 22, 1996 (Exhibit L to the Intervenors' Written Presentation). The NRC Staff was also aware of the attempts of HRI's cultural resources contractor (Dr. Lorraine Heartfield) to contact the Interested Tribes. *See* Exhibit N to the Intervenors' Written Presentation. Additionally, an NRC cultural resource contractor, Ms. Susan Schexnayder, made attempts to elicit [traditional cultural properties] information from the Interested Tribes. In October 1995, Ms. Schexnayder met with tribal officials from the NNHPD, the Navajo Nation's Crownpoint, Church Rock, and Pinedale Chapters, the Pueblo of Acoma, the Pueblo of Hopi, and the Pueblo of Zuni. *See* [NRC Staff Exhibit 4, at 6].

See also NRC Staff Exhibit 4, at 4 (''[i]n her capacity as cultural resources consultant to HRI, Dr. Heartfield has had numerous interactions with . . . the directors of cultural resource programs of the Hopi, Zuni, and Acoma, and the All Pueblo Council'').

properties (50 F.3d at 862). Here, in sharp contrast, there is no suggestion that the Staff withheld relevant information from the NMSHPO or the NNHPD or otherwise impeded them in the performance of their NHPA responsibilities. I thus conclude that *Pueblo of Sandia* is not apposite here.

The Intervenors nevertheless assert that the facts here are similar to *Pueblo of Sandia,* because the Staff learned in March 1996 that the Pueblo of Zuni may ''have places of traditional and cultural importance within the [Crownpoint] project area'' (Intervenors' Exhibit O), but the Staff failed to investigate this information (Intervenors' Written Presentation at 23-24). This assertion lacks merit. It ignores that on June 19, 1997, the Staff sent a consultation letter to the Pueblo of Zuni Heritage and Historic Preservation Office (as well as to the NMSHPO, the NNHPD, and the Hopi Cultural Preservation Office) that included a copy of the April 1997 MNM Report and that sought comments on the findings therein. *See* Attachment L to NRC Staff Exhibit 1. Among its findings, the MNM Report states that of the Navajo, Hopi, Laguna, Acoma, and Zuni Tribes, ''[o]nly the Navajos have demonstrated current traditional uses'' of the areas in and around where HRI plans to conduct ISL mining (Attachment K to NRC Staff Exhibit 1, at 17). The Staff received no challenges regarding this finding (NRC Staff Exhibit 3, at 5), nor did the Staff receive any challenges regarding the MNM Report's extensive discussion of the investigatory efforts expended to determine the existence of traditional cultural properties (Attachment K to NRC Staff Exhibit 1, at 17-22). Finally, the Staff did not receive comments from any tribal group in response to its consultation letter of May 20, 1998 — which was sent to the Pueblo of Zuni Heritage and Historic Preservation Office, the Hopi Cultural Preservation Office, the Pueblo of Acoma, the Pueblo of Laguna, the All Pueblo Indian Council, and the Navajo Nation Crownpoint and Church Rock Chapters — seeking comments regarding the Staff's proposed NHPA finding of ''no effect'' on Section 12, and its proposed NHPA finding of no historic properties on Section 17. *See* Attachment O to NRC Staff Exhibit 1; NRC Staff Exhibit 1, at 9. Given the above evidence, the Intervenors' attempt to compare the Staff's investigatory efforts with those of the agency in *Pueblo of Sandia* is rejected.[20]

---

[20] In a related vein, the Intervenors attack the Staff's NHPA conclusion that HRI's mining operations will have ''no effect'' on Section 17, alleging that the MNM Report fails to ''consider the presence of non-Navajo Traditional Cultural Properties'' (Intervenors' Written Presentation at 25). This allegation is incorrect. As discussed above in text, the MNM Report expressly considered the presence of non-Navajo Traditional Cultural Properties, and it concluded that the Navajo alone had demonstrated current traditional uses in the vicinity of HRI's proposed project. Moreover, the Staff provided non-Navajo tribal groups with several opportunities to comment on, or challenge, that conclusion, but they

(Continued)

d. Finally, the Intervenors contend that the Staff's NHPA review is inadequate for HRI's operations at Unit 1 and Crownpoint, alleging that ''further studies should be completed [at both sites] to confirm that all cultural properties are identified to ensure that the NRC Staff is aware of the full cultural impact of the license issuance'' (Intervenors' Written Presentation at 25; *see also id.* at 26-27). This argument, however, is simply a rehashed version of the Intervenors' challenge to the Staff's phased approach to NHPA review in this case. For the reasons discussed *supra* Part III.A.1, that argument lacks merit.

Moreover, contrary to the Intervenors' suggestion (Intervenors' Written Presentation at 25-27), the fact that the Staff has not completed the NHPA review process for HRI's entire proposed undertaking does not give rise to an inference that HRI's mining operations pose a threat to cultural resources. LC 9.12 states that before ''engaging in any construction activity not previously assessed'' by the NRC Staff in its NHPA review process, HRI ''shall conduct a cultural resource inventory.'' LC 9.12 further states that all ''disturbances associated with the proposed development'' must be in compliance with the NHPA and its implementing regulations. Thus, as HRI and the NRC Staff both attest (e.g., HRI Response at 30; NRC Staff Response at 32-34), the NHPA review process will be performed and completed for each relevant site *before* HRI commences any construction activity at that site. This review process, coupled with HRI's implementation of its ''avoidance policy,'' will ensure the identification and protection of cultural resources. *See* FEIS at 4-112; *see also* Attachment G to NRC Staff Exhibit 1, at 27; Attachment H to NRC Staff Exhibit 1, at 28.

Additionally, HRI's license provides for the protection of cultural resources that may be discovered during construction or mining operations. LC 9.12 requires the cessation of any work that results in the discovery of previously unknown cultural artifacts. Such ''artifacts shall be inventoried and evaluated in accordance with 36 C.F.R. Part 800, and no disturbance shall occur until the licensee has received written authorization to proceed from the State and Navajo Nation Historic Preservation Offices.''

In short, although the NHPA review process remains to be completed in a phased approach for the Unit 1 and Crownpoint sites, the licensing conditions imposed by the NRC Staff assure compliance with the NHPA and, correlatively, protection of cultural resources.[21]

---

declined to do so. The Staff reasonably inferred from their silence that the non-Navajo tribal groups agreed with that conclusion (NRC Staff Exhibit 3, at 5). *See Immigration and Naturalization Service v. Lopez-Mendoza,* 468 U.S. 1032, 1043 (1984) (in civil proceedings, an administrative official is permitted to draw a reasonable ''inference from the silence of one who is called upon to speak'').

[21] As HRI correctly asseverates, its *future* cultural resources reviews will be performed in compliance with the NHPA regulations that are in effect at the time the reviews are conducted. *See* HRI Exhibit A at 13; HRI Exhibit B at 6.

B. The Intervenors' Assertion That the FEIS Fails Adequately To Consider the Impact of HRI's Mining on Cultural Resources Lacks Merit

The Intervenors claim that the Staff's issuance of HRI's license to engage in ISL mining at Section 17, Unit 1, and Crownpoint violated NEPA. In support of this claim, they point out that the FEIS was published before the Staff completed the NHPA review for those sites and, accordingly, before all the cultural resources were identified and evaluated (Intervenors' Written Presentation at 29). Further, the FEIS allegedly ''focuses on only the impacts to cultural resources that result from physical damage and only covers sites that have been discovered within the project'' (*ibid.*). In short, the Intervenors argue that the Staff failed, in violation of NEPA, to take the requisite ''hard look'' at *all* the effects this project will have on cultural resources prior to issuing the license (*id.* at 28-29). For the following reasons, I conclude that this argument lacks merit.[22]

---

[22] HRI requests that this argument be stricken because, insofar as the Intervenors challenge the adequacy of the FEIS, they allegedly exceed the scope of the specific area of concern in this proceeding, which is limited to issues relating to cultural resources (HRI's Response at 31). I find that the Intervenors' argument falls well within the scope of this proceeding and, therefore, deny HRI's request.

I also decline the Staff's invitation (NRC Staff's Response at 46) to rule that the Intervenors' argument is barred by law of the case doctrine. The Staff is correct in stating that during Phase I of this proceeding, the Commission rejected the Intervenors' argument that the cultural resources review embodied in the FEIS was inadequate because it was completed before the Staff completed the NHPA review for the relevant sites (*see* CLI-99-22, 50 NRC at 13-14). However, the Commission's decision was guided by the fact that — unlike the present case — the Staff's NHPA review in the prior case for Section 8 mining operations was ''completed and released before NRC issued the license'' (*id.* at 13) and was part of the administrative record considered by the Commission. Because the NHPA review in the prior proceeding did not reveal any new information that ''present[ed] a 'seriously different picture of the environmental impact' '' that had been considered by the Staff in the FEIS, the Commission rejected the Intervenors' assertion that the Staff's cultural resources review under NEPA was unlawful (*id.* at 14). Thus, the issue in the prior proceeding was whether the FEIS for Section 8 mining operations was adequate in light of the subsequently completed NHPA review that confirmed the Staff's assessment of environmental impacts in the FEIS. By contrast, the issue here with regard to Unit 1 and Crownpoint is whether the FEIS was adequate in the *absence* of a completed NHPA review for those sites; plainly law of the case doctrine does not bar consideration of that issue.

Nor does law of the case doctrine bar the Intervenors' argument with regard to Section 17, because resolving the legitimacy of the FEIS for Section 17 requires looking beyond the evidence considered by the Commission in the Phase I decision and considering evidence that is specific to this Phase II proceeding (i.e., the NHPA and NEPA reviews for Section 17). However, applying the rationale from the Commission's Phase I decision (CLI-99-22, 50 NRC at 14), I find no legal flaw in the Staff's NEPA review with regard to Section 17, because the Intervenors do not allege that the NHPA record for that site reveals any new information that presented a seriously different view of the environmental impacts that had been considered by the Staff in the FEIS, nor does my review of the record reveal

(Continued)

Contrary to the Intervenors' understanding, the ''hard look'' required by NEPA is not to be equated with completion of the NHPA review. Although an agency may coordinate and, where practicable, integrate its NEPA and NHPA review efforts (*see* 10 C.F.R. § 51.70(a), 36 C.F.R. § 800.14(a)), the two statutes impose separate and distinct obligations. *See, e.g., Preservation Coalition, Inc. v. Pierce,* 667 F.2d 851, 859 (9th Cir. 1982). There is no requirement in NEPA, or in the NRC's regulations implementing NEPA (10 C.F.R. Part 51), to complete the NHPA review in order to satisfy the obligations imposed by NEPA.

Rather, an agency satisfies its obligation under NEPA to take a ''hard look'' at the impacts a project will have on cultural resources when it engages in informed and reasoned decisionmaking that is guided by the objective of ''preserv[ing] important historic [and] cultural . . . aspects of our national heritage'' (42 U.S.C. § 4331(b)(4)). Specifically, an agency must reasonably (1) consider the historic and cultural resources in the affected area; (2) assess the impact of the proposed action, and reasonable alternatives to that action, on cultural resources; (3) disseminate the relevant facts and assessments for public comment; and (4) respond to legitimate concerns. *See generally Hughes River Watershed Conservancy v. Johnson,* 165 F.3d 283, 288 (4th Cir. 1999); *Citizens Against Burlington, Inc. v. Busey,* 938 F.2d 190, 194-96 (D.C. Cir.), *cert. denied,* 502 U.S. 994 (1991); *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 431 (2003). Here, a review of the FEIS shows that the NRC Staff took the requisite ''hard look.''

First, the Staff provided a lengthy discussion of cultural resources (FEIS at 3-65 to 3-77). It defined ''culture'' for purposes of the FEIS, and it explained the criteria for identifying ''cultural resources'' that are eligible for inclusion in the National Register of Historic Places (*id.* at 3-66). It further defined the three categories of cultural resources that are pertinent to the NEPA process — archaeological resources, historical resources, and traditional cultural resources — and it explained that a traditional cultural resource is deemed to be a traditional cultural property if it is eligible for inclusion in the National Register because of its ''association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community'' (*id.* at 3-67).

Notably, the Staff recognized that traditional cultural property may be difficult to recognize, because (FEIS at 3-67):

---

any such information. *See, e.g.,* Attachments I, J, K, N, and Q to NRC Staff Exhibit 1. Moreover, the analysis above in text (*infra* Part III.B) — which concludes that the Staff took the requisite ''hard look'' at cultural resources when it performed its NEPA review for Unit 1 and Crownpoint — applies with equal force to the Staff's NEPA review for Section 17.

> A traditional ceremonial location may look like merely a mountaintop, a lake, or a stretch of river; a culturally important neighborhood may look like any other aggregation of houses, and an area where culturally important economic or artistic activities have been carried out may look like any other building, field of grass, or piece of forest in the area.

Because of the difficulty in identifying and evaluating traditional cultural property, and because such property may not come to light through the conduct of archaeological, historical, or architectural surveys, the Staff emphasized that ''it is essential to involve in the assessment both traditional practitioners, who make use of such resources, and trained professionals, who can make an independent assessment of their importance'' (*id.* at 3-68).

The Staff then provided a ''broad overview of human development in the project region'' (FEIS at 3-68), discussing cultural resources linked to the Paleo-Indian and Archaic Periods from 10,000 to 400 B.C. (*id.* at 3-68 to 3-69), cultural resources linked to the Basketmaker cultures from 400 B.C. to 750 A.D. (*id.* at 3-69), cultural resources linked to the Anasazi culture from 700 to 1300 A.D. (*id.* at 3-69 to 3-70), cultural resources linked to the Pueblo IV culture from 1300 to 1540 A.D. (*id.* at 3-70 to 3-71), and cultural resources from the Spanish Period in 1540 A.D. through the American Period in 1846 to the present (*id.* at 3-71 to 3-73).

The Staff explained that NEPA's cultural resources review, coupled with the NHPA review, ''appropriately reflects the goal of avoiding adverse impacts upon Native American cultures'' (FEIS at 3-73). Recognizing that HRI's proposed ISL mining project would occur on land ''rich in cultural artifacts,'' the Staff discussed the cultural resource surveys that were being conducted pursuant to the NHPA. These included ''archaeological surveys of areas within the proposed project sites that have not previously been surveyed,'' as well as a ''detailed traditional culture property survey, which is being conducted by professional archaeologists and ethnographers with input from local Native American practitioners and residents and which builds on the preliminary traditional cultural property assessment work conducted for this EIS'' (*ibid.*). The results of these surveys, stated the Staff, will be reviewed by the NMSHPO and the NNHPD, and other tribal groups will be invited to participate in the review process (*id.* at 3-74).

Additionally, the Staff described the results of the completed traditional cultural property surveys and the preliminary surveys at each of HRI's proposed mining sites — Crownpoint (FEIS at 3-74 to 3-76), Unit 1 (*id.* at 3-76 to 3-77), and Sections 8 and 17 at Church Rock (*id.* at 3-77). It bears emphasizing that — although additional surveys will be conducted for purposes of the NHPA review (LC 9.12) — for purposes of the NEPA review, the Staff had the benefit of archaeological and traditional cultural properties surveys from all of HRI's

proposed mining sites (FEIS at 3-69 to 3-77; Attachment J to NRC Staff Exhibit 1).

The comprehensive information discussed above provided the foundation for the Staff's consideration of the potential impacts of HRI's project (and alternatives) on cultural resources, which is discussed in the FEIS chapter on environmental consequences, monitoring, and mitigation (FEIS at 4-109 to 4-112). Contrary to the Intervenors' assertion, the Staff's consideration of impacts to cultural resources was not limited to those that ''result from physical damage'' (Intervenors' Written Presentation at 29). The FEIS reveals that the Staff also discussed numerous potential impacts, including those that can result from simply ''moving an artifact from its original location. Such movement destroys the archaeological 'context' in which the artifact might have been better understood as a component of the overall culture'' (FEIS at 4-109).

Nor is there merit to the Intervenors' assertion that the Staff, in its assessment of impacts on cultural resources, only considered ''sites that have been discovered within the project'' (Intervenors' Written Presentation at 29). The Staff recognized the possibility that ''subsurface artifacts or unmarked graves could be discovered'' during HRI's development and operation of its mines (FEIS at 4-110). In that event, HRI's archaeological monitor — who must be present during all earth-disturbing activities, including construction, drilling, and reclamation procedures — would halt work in the area, and the artifacts or human remains would be evaluated for their significance pursuant to applicable laws, including the Archaeological Resources Protection Act, NHPA, American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, Navajo Nation Cultural Resources Protection Act, Navajo Nation Policy To Protect Traditional Cultural Properties, and the Navajo Nation Policy for the Protection of Jishchaa', Human Remains, and Funerary Items, as well as policies of Puebloan tribes claiming descent from the Anasazi culture in the event Anasazi gravesites are discovered (*ibid.*).

The Staff observed that the ''primary potential threats to cultural resources from HRI's proposed project are earth moving, incidental pedestrian and vehicle traffic, and looting following site identification'' (FEIS at 4-110). But the Staff determined that the potential for adverse impacts ''would be reduced or eliminated'' by HRI's ''total avoidance'' policy in its cultural resource management plan, which seeks as a ''principal objective . . . to avoid all cultural resources'' (*ibid.*). The Staff described the procedural outline of HRI's ''total avoidance'' policy as follows (*ibid.*):

> [T]he policy calls for inventory of all project areas for cultural resources (a process currently under way), site demarcation, and development of specific avoidance procedures. Cultural resources identified in the lease areas would be recognized (and demarcated if appropriate) as protection zones where human activity would

> be prohibited. This policy is regarded as feasible because ISL mining allows considerable flexibility in the layout of facilities. Any construction or drilling activity requiring subsurface disturbances . . . would be preceded by archaeological testing and an archaeological monitor would be present during construction and reclamation activities.

Notably, the Staff concluded that, ''[a]ssuming HRI's successful implementation of the policy of avoidance[,] . . . the proposed project has minimal potential to result in significant impacts on cultural resources'' (FEIS at 4-112; *accord id.* at 4-126).

The Staff promulgated the Draft Environmental Impact Statement (DEIS) for public comment, and it adequately responded to all comments relating to cultural resources (FEIS at A-47 to A-52). For example, in response to a comment that criticized the DEIS for ''inadequate treatment of and disregard for potential impacts on Native American culture'' (*id.* at A-47), the Staff explained that (*id.* at A-48): (1) the Staff would ensure that HRI complies with all statutory requirements that provide protection for Native American culture; (2) Native American tribes that have members in the project area or that have cultural affiliations with groups that historically occupied or used the area will be given the opportunity to help identify and protect any artifacts or traditional cultural property recovered during operation of the proposed project; (3) HRI would adhere to a cultural resources management plan that averted harming cultural property through a ''total avoidance'' policy, and all persons admitted to the site would be trained on required protective measures toward cultural resources; (4) HRI contracted with a consultant approved by the NMSHPO and the NNHPD to conduct surveys to determine whether traditional cultural properties are located in or near the sites, and the consultant worked with all interested Native American tribes to identify such properties; and (5) representatives of each tribe were asked to identify any traditional cultural properties — including rock art, rock formations, or viewsheds — that their tribes considered sacred or culturally important.

The Staff also responded to comments regarding (1) the consultation requirements under the NHPA, the Native American Graves Protection and Repatriation Act, and other federal and Navajo Nation laws (FEIS at A-48 to A-49); and (2) potential interference with Navajo religious beliefs and traditional cultural values (*id.* at A-50 to A-51).

Finally, the FEIS shows that — contrary to the Intervenors' assertion (Intervenors' Written Presentation at 7) — the Staff expressly considered the impact of HRI's operations on the ability of traditional practitioners to gather herbs. A representative from each tribe was specifically asked to identify any plants that were used medicinally or ceremonially, and it was determined that no such plants existed at the proposed sites (FEIS at A-48, A-51). *See also* Attachment K to

NRC Staff Exhibit 1, at 18 (MNM Report states that the traditional practitioners who were interviewed stated that cultural herbs were ''outside of the proposed project areas''); *accord id.* at 20, 21, 22; Intervenors' Exhibit N at 4.

The above evidence demonstrates that the Staff took a ''hard look'' at the impacts of HRI's project on cultural resources. The Staff explained the purpose of its inquiry, described its methods for conducting the inquiry, identified cultural resources in and near the project area, considered HRI's proposed project and alternatives, discussed mitigation measures, provided the DEIS for public comments, responded to those comments, and ultimately concluded that HRI's project posed no significant risk of harm to cultural resources.

Although the Staff recognized that additional work was necessary to complete the NHPA review (FEIS at 3-74, 4-112), it concluded that its cultural resources review satisfied NEPA's ''hard look'' requirement. I agree.

My conclusion finds support in the rationale of the Commission's recent decision in *McGuire/Catawba,* CLI-03-17. There, the Commission — in the context of a license renewal proceeding — denied a petition for review in which an intervenor challenged the Board's rejection of a contention that the Staff failed to take a ''hard look'' at certain environmental consequences. The Commission stated (58 NRC at 431):

> To litigate a NEPA claim, an intervenor must allege, with adequate support, that the NRC Staff has failed to take a ''hard look'' at significant environmental questions — i.e., the Staff has unduly ignored or minimized pertinent environmental effects. Here, given the extensive discussion [devoted to environmental questions] in the EISs, [the intervenor's] suggestion that the NRC has not given the issue a ''hard look'' borders on the frivolous.

In the instant case, as in *McGuire/Catawba,* the Staff's comprehensive treatment of cultural resource issues in the FEIS negates any notion that the Staff ''unduly ignored or minimized'' the effect of HRI's proposed mining on cultural resources (58 NRC at 431). Accordingly, the Intervenors' assertion that the Staff failed to take a ''hard look'' at cultural resources issues must be rejected.

IV. CONCLUSION

For the foregoing reasons, I find — with the concurrence of Special Assistants Dr. Richard Cole and Dr. Robin Brett — that HRI has carried its burden of demonstrating that the Intervenors' challenges relating to cultural resources do not provide a basis for invalidating HRI's license to perform ISL uranium mining at Section 17, Unit 1, and Crownpoint.

Pursuant to 10 C.F.R. §§ 2.786(b) and 2.1253, a party wishing to challenge this Decision before the Commission must file a petition for review within 15

days after service of this decision. Any other party to this proceeding may, within 10 days after service of a petition for review, file an answer supporting or opposing Commission review (*id.* § 2.786(b)(3)). The filing of a petition for review is mandatory for a party seeking to exhaust its administrative remedies before seeking judicial review (*id.* §§ 2.786(b)(1) and 2.1253). If no party files a petition for review of this Decision, and if the Commission does not review it *sua sponte,* this Decision constitutes the final action of the Commission 30 days after its issuance (*id.* § 2.1251(a)).

It is so ORDERED.

BY THE PRESIDING OFFICER[23]

E. Roy Hawkens
ADMINISTRATIVE JUDGE

Rockville, Maryland
September 16, 2005

[23] Copies of this Partial Initial Decision were sent this date by Internet e-mail or facsimile transmission to all participants or counsel for participants.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Thomas S. Moore, Chairman
Alex S. Karlin
Alan S. Rosenthal

In the Matter of **Docket No. PAPO-00**
(ASLBP No. 04-829-01-PAPO)
(NEV-03)
(Pre-Application Matters)

U.S. DEPARTMENT OF ENERGY
(High-Level Waste Repository) **September 22, 2005**

In this proceeding concerning the pre-license application phase of the United States Department of Energy's (DOE) planned application for a license to construct a repository for high-level radioactive waste at Yucca Mountain, Nevada, the Pre-License Application Presiding Officer Board grants the State of Nevada's motion to compel production of DOE's July 2004 draft license application and orders that DOE make the draft license application available on the Licensing Support Network (LSN) no later than the time it makes its certification of its document collection pursuant to 10 C.F.R. § 2.1009(b).

RULES OF PRACTICE: HLW REPOSITORY (PRE-APPLICATION PHASE, PRODUCTION OF DOCUMENTARY MATERIAL)

There is no mutually exclusive dichotomy between 10 C.F.R. § 2.1003(a) ''documentary material'' and 10 C.F.R. § 2.1003(b) ''basic licensing documents.'' Instead, basic licensing documents are simply a subcategory of documentary material. Subsection (b) is primarily intended to provide direction as to *who* is

responsible for making these very large documents, which will be in the hands of multiple parties, electronically available on the LSN.

RULES OF PRACTICE: HLW REPOSITORY (PRE-APPLICATION PHASE, PRODUCTION OF DOCUMENTARY MATERIAL)

Class 1 ''reliance'' documentary material is ''[a]ny information upon which a potential party . . . intends to rely and/or cite in support of its position in the proceeding.'' 10 C.F.R. § 2.1001. Whether or not a potential party intends to rely upon or to cite a document is determined from the perspective of the potential party that is producing the document on the LSN. Stated another way, the phrase ''potential party'' in this context means the producing party.

RULES OF PRACTICE: HLW REPOSITORY (PRE-APPLICATION PHASE, PRODUCTION OF DOCUMENTARY MATERIAL)

Merely because there is a continuity of certain ''information'' between the draft license application and the final license application does not render the draft license application ''reliance'' category documentary material. The question is whether the producing party intends to rely upon or to cite the document in question, not just some of the information in it.

RULES OF PRACTICE: HLW REPOSITORY (PRE-APPLICATION PHASE, PRODUCTION OF DOCUMENTARY MATERIAL)

Class 2 ''nonsupporting'' documentary material is ''[a]ny information that is known to, and in the possession of, or developed by the party that is relevant to, but does not support, [Class 1] information or that party's position.'' 10 C.F.R. § 2.1001. As with Class 1 ''reliance'' documentary material, whether or not a document fits the ''nonsupporting'' category is determined from the perspective of the potential party producing the document.

RULES OF PRACTICE: HLW REPOSITORY (PRE-APPLICATION PHASE, PRODUCTION OF DOCUMENTARY MATERIAL)

Appendix A of the Topical Guidelines in Regulatory Guide 3.69 is a ''nonexhaustive list of types of documents that may be included in the LSN'' and merely provides examples of the types of documents that are to be on the LSN, making it improper to rely on the absence of a specific example to suggest a document need not be made available.

RULES OF PRACTICE: HLW REPOSITORY (PRE-APPLICATION PHASE, PRODUCTION OF CIRCULATED DRAFTS)

The regulations parenthetically deal with the production of drafts, stating that parties shall make available ''all documentary material (including circulated drafts but excluding preliminary drafts).'' 10 C.F.R. § 2.1003(a)(1). The term ''circulated draft'' is defined as ''a nonfinal document circulated for supervisory concurrence or signature in which the original author or others in the concurrence process have non-concurred.'' 10 C.F.R. § 2.1001. This definition can be broken into five essential elements requiring: (1) a nonfinal document (2) that has been circulated (3) to supervisors (4) for the purposes of concurrence or signature, and (5) in which the original author or others in the concurrence process have nonconcurred.

RULES OF PRACTICE: HLW REPOSITORY (PRE-APPLICATION PHASE, PRODUCTION OF CIRCULATED DRAFTS)

Documents signed by the potential party or its contractors are ''final'' within the meaning of the 10 C.F.R. § 2.1001 definition of ''circulated draft.'' However, even documents without a signature, such as memoranda and e-mails, if finalized, treated as final, or delivered to the intended addressees, can be final documents.

STATUTORY CONSTRUCTION OR INTERPRETATIONS: GENERAL RULES

When a regulatory term is undefined in the regulations, we are left to glean its definition from its plain meaning, the structure of the regulation, and then, if appropriate, the regulatory history.

RULES OF PRACTICE: HLW REPOSITORY (PRE-APPLICATION PHASE, PRODUCTION OF CIRCULATED DRAFTS)

For the purposes of meeting the 10 C.F.R. § 2.1001 definition of ''circulated draft,'' the term ''concurrence'' should be given its plain meaning, i.e., ''agreement'' or ''approval.'' *See Webster's Third New International Dictionary* 472 (1993). A document that is circulated for ''concurrence'' is circulated for substantive agreement or approval. We construe the term ''concurrence process'' as used in 10 C.F.R. § 2.1001 as a process whereby management reviews the document for substantive agreement or disagreement.

RULES OF PRACTICE: HLW REPOSITORY (PRE-APPLICATION PHASE, PRODUCTION OF CIRCULATED DRAFTS)

In determining whether a ''concurrence process'' has occurred, we look to objective factors such as whether the document is a significant, well-developed, mostly complete draft; the nature and extent of management review devoted to the document; and whether the management review was for the purpose of agreement on the substance of the draft.

RULES OF PRACTICE: HLW REPOSITORY (PRE-APPLICATION PHASE, PRODUCTION OF CIRCULATED DRAFTS)

Within the meaning of the 10 C.F.R. § 2.1001 definition of ''circulated draft,'' the word ''nonconcurrence'' means a comment or objection indicating significant, substantive nonagreement with the draft in question, i.e., a nonagreement requiring a substantive change in the document before the individual in question agrees with or will approve it. It needs to be ''formal'' in the sense that it must be substantive and serious, but need not bear the label of ''nonconcurrence'' or some other formalistic name. The label placed on the comment, whether it be ''nonconcurrence,'' ''mandatory comment,'' or ''formal objection,'' is not determinative. A comment requiring substantive change to the circulated document as a condition to agreement or further approval of it, is the essential concept.

STATUTORY CONSTRUCTION OR INTERPRETATIONS: GENERAL RULES

Where the language of the regulation is clear, it is unnecessary and improper to modify it by resorting to entirely extraneous statements in the Statement of Considerations.

RULES OF PRACTICE: HLW REPOSITORY (PRE-APPLICATION PHASE, PRODUCTION OF CIRCULATED DRAFTS)

The second clause of the second sentence of the regulatory definition of ''circulated draft'' in 10 C.F.R. § 2.1001 states:

> A ''circulated draft'' meeting the above criterion includes a draft of a document that eventually becomes a final document, and a draft of a document that does not become a final document due to either a decision not to finalize the document or the passage of a substantial period of time in which no action has been taken on the document.

RULES OF PRACTICE: HLW REPOSITORY (PRE-APPLICATION PHASE, PRODUCTION OF CIRCULATED DRAFTS)

The second and third clauses of the second sentence of the definition of ''circulated draft'' in 10 C.F.R. § 2.1001 make clear that, should a draft document satisfy the five criteria in the definition of circulated draft, the draft document must be made available on the LSN if a decision is made not to finalize the draft document, or if a substantial period of time has passed with no further action on the draft document. In other words, these provisions delineate two situations in which the decisionmaking process on a draft document is deemed to be final or concluded.

RULES OF PRACTICE: PRIVILEGE (DELIBERATIVE PROCESS); HLW REPOSITORY (PRE-APPLICATION PHASE, PRODUCTION OF CIRCULATED DRAFTS)

NRC regulations clearly waive the deliberative process privilege for all circulated drafts, stating: ''Notwithstanding any availability of the deliberative process privilege under paragraph (a) of this section, circulated drafts not otherwise privileged shall be provided for electronic access pursuant to § 2.1003(a).'' 10 C.F.R. § 2.1006(c).

RULES OF PRACTICE: PRIVILEGE (WORK PRODUCT)

When a document is prepared for both a litigation and nonlitigation purpose the test for determining whether the ''dual purpose'' documents is ''prepared in anticipation of litigation'' is if, ''in light of the nature of the document and the factual situation in the particular case, the document can fairly be said to have been prepared or obtained *because of* the prospect of litigation.'' 8 Charles Alan Wright et al., *Federal Practice & Procedure* § 2024 (2d ed. 1994) (emphasis added).

RULES OF PRACTICE: PRIVILEGE (WORK PRODUCT)

In expounding upon the formulation for determining whether a dual purpose document qualifies for the privilege, the Court of Appeals for the Second Circuit explained that ''the 'because of' formulation . . . withholds protection from documents that are prepared in the ordinary course of business or that would have been created in essentially similar form irrespective of the litigation . . . [e]ven if such documents might also help in preparation for litigation . . . .'' *United States v. Adlman,* 134 F.3d 1194, 1202 (2d Cir. 1998).

MEMORANDUM AND ORDER
(Ruling on State of Nevada's June 6, 2005 Motion To Compel)

Before the Pre-License Application Presiding Officer (PAPO) Board is a motion by the State of Nevada (State) seeking to compel production of the United States Department of Energy's (DOE) July 2004 draft license application (Draft LA) on or before the date DOE makes its initial Licensing Support Network (LSN) certification, or in the alternative, for a declaratory order to the same effect.[1] After due consideration of the written presentations and the representations at an oral argument, we conclude that the Draft LA is ''documentary material,'' is a ''circulated draft,'' and is not protected by the litigation work product or deliberative process privileges. Therefore, we grant the State's motion.

I. BACKGROUND

A. Procedural Posture

DOE initially raised the issue of the status of its Draft LA with respect to the LSN and requested briefing and early resolution of this issue. In an April 25, 2005 filing discussing the content of privilege logs, DOE stated that ''drafts of the License Application and comments on those drafts'' are protected by the litigation work product privilege.[2] During the May 4, 2005 case management conference, DOE stood by this claim and added that, because drafts of the license application are ''preliminary drafts,'' they need not be included on the LSN.[3] In its next filing, DOE requested that we establish a briefing schedule to resolve this matter.[4]

During a May 18, 2005 case management conference, we learned that the dispute now involved a specific draft of the license application, the ''July 2004

---

[1] Nevada's Motion To Compel Production of DOE's Draft Yucca Licensing Application, or in the Alternative, for a Declaratory Order (June 6, 2005) at 1 [hereinafter State Motion To Compel]. In this decision, as discussed subsequently in Part II.B.2, the term ''Draft LA'' refers to the draft license application submitted to DOE by its contractor, Bechtel-SAIC Company, LLC, on July 26, 2004, and its September 2004 interim iteration. It excludes the ''second draft,'' of the license application (so described by the person in overall charge of the office responsible for producing the license application, Dr. Margaret Chu, Director of the DOE Office of Civilian Radioactive Waste Management), that was prepared in November 2004. State Motion To Compel, Exh. 10, U.S. Nuclear Waste Technical Review Board (NWTRB), Winter Board Meeting Transcript (Feb. 9, 2005) at 16 [hereinafter 2/9/05 NWTRB Transcript].

[2] [DOE]'s Supplement Regarding the Proposed Case Management Order Regarding Privilege Designations and Challenges (Apr. 25, 2005) at 8 n.2.

[3] Tr. at 89-95.

[4] [DOE]'s Memorandum in Response to May 11, 2005 Memorandum and Order Regarding Second Case Management Conference (May 12, 2005) at 27-29.

Draft LA,'' and that the State agreed with DOE's request to set a briefing schedule.[5] At that conference, DOE repeated its desire for early resolution of the dispute on this document and suggested a procedure for handling the matter.[6] Generally adopting DOE's suggestions, we established a briefing schedule and the procedures to be followed. Specifically, we directed that, if the State desired to pursue the matter, it should make a 10 C.F.R. § 2.1018 document request for the Draft LA by May 19, 2005.[7] We instructed DOE to respond, setting forth the specific grounds for its position, by May 23, 2005, a requirement with which DOE agreed.[8] Thereupon, the State would have until June 6, 2005, to file a motion to compel production and a brief addressing each of DOE's grounds for refusing to produce the Draft LA.[9] DOE and any other interested party would then have until June 20, 2005, to file responses.[10] The State would have until June 28, 2005, to file a reply brief.[11]

The parties complied with the established deadlines. On May 19th, the State requested the Draft LA.[12] DOE denied the State's request, asserting that (1) the license application is not ''documentary material,'' but is a ''basic licensing document'' for which there is no specific mandate to produce drafts; (2) the Draft LA is not ''documentary material'' because it merely cites and relies on underlying information that constitutes documentary material; (3) even if it were documentary material, the Draft LA is a ''preliminary draft,'' and, as such, is specifically excluded from production on the LSN; and (4) the Draft LA is

---

[5] Tr. at 379-81.

[6] Tr. at 384.

[7] Tr. at 413-14.

[8] Tr. at 404-05, 413-14.

[9] Tr. at 414.

[10] *Id.*

[11] *Id.* It should be noted that, because DOE raised this issue initially, we could have ordered DOE to file a motion for a protective order regarding the Draft LA, rather than requiring the State to file a motion to compel production of it. Although such procedural distinctions sometimes determine which party has the burden of proof, *see* 10 C.F.R. § 2.325 (''[u]nless the presiding officer otherwise orders, the applicant or the proponent of an order has the burden of proof''), this is not necessarily the case and the presiding officer can allocate the burden differently. As set forth *infra* Part II.B.6, and as discussed at the case management conference, Tr. at 404-12, given that DOE possesses virtually all of the relevant information regarding this draft (to whom was this document circulated? for what purpose? what comments were received?), we conclude that it should have significant elements of the burden of proof herein. This conclusion is consistent with our Second Case Management Order, which placed the burden of establishing a privilege on the claimant of the privilege. *See* Second Case Management Order (Pre-License Application Phase Document Discovery and Dispute Resolution) (July 8, 2005) at 5 (unpublished) (''The privilege claimant shall have the ultimate burden of persuasion that a document or communication qualifies for a claimed privilege'').

[12] State Motion To Compel, Exh. 1, Letter from Martin G. Malsch, Egan, Fitzpatrick, Malsch & Cynkar, PLLC, to Donald P. Irwin, Hunton & Williams (May 19, 2005), at 1.

protected by the litigation work product and deliberative process privileges.[13] The State filed its motion to compel, briefing the four reasons DOE gave for denying the State's request and making the additional argument that refusal to produce the Draft LA violates Freedom of Information Act (FOIA)[14] principles.[15]

DOE, the NRC Staff, and the Nuclear Energy Institute (NEI) filed responses.[16] DOE insisted that the Draft LA is not documentary material or a circulated draft. It did *not* argue, however, that the Draft LA was privileged, as it had in its refusal letter to the State, asserting instead that the question of whether the Draft LA is a circulated draft ''trumps any need to consider'' the deliberative process privilege, and that the application of the litigation work product privilege is ''irrelevant or at least premature.''[17] The NRC Staff disagreed with the State on issues of legal interpretation, but did not take a position on the factual questions of whether the Draft LA is documentary material, a circulated draft, or privileged.[18] NEI urged us to deny the State's motion because: (1) NRC regulations do not require disclosure of any draft versions of the license application; (2) the Draft LA is not ''documentary material''; and (3) the State is seeking to circumvent the established pre-license application phase of the proceeding.[19] In its reply brief, the State maintained that the Draft LA is documentary material and a circulated draft, and that we may consider the public interest in deciding this matter and order disclosure of the Draft LA without undermining the adjudicatory process.[20]

On July 12, 2005, we held oral argument on the State's motion.[21] During the argument, it became clear that there were several important factual issues, the

---

[13] State Motion To Compel, Exh. 2, Letter from Donald P. Irwin, Hunton & Williams, to Martin G. Malsch, Egan, Fitzpatrick, Malsch & Cynkar, PLLC (May 23, 2005), at 1-2 [hereinafter DOE Denial Letter]. Contrary to our instructions, Tr. at 408-09, and DOE's agreement, Tr. at 405, 412-13, DOE's denial letter provided only a brief, conclusory explanation of the reasons for denying the State's request.

[14] 5 U.S.C. § 552 (2000).

[15] State Motion To Compel at 3, 21-25.

[16] [DOE]'s Brief in Opposition to Nevada's Motion To Compel Production of the Draft Yucca License Application, or in the Alternative, for a Declaratory Order (June 20, 2005) [hereinafter DOE Brief in Opposition]; Brief of the [NEI] Opposing the State of Nevada's Motion To Compel Production of the July 2004 Draft Yucca Mountain License Application (June 20, 2005) [hereinafter NEI Brief in Opposition]. The NRC Staff filed its response on June 20, 2005, but inadvertently omitted the Table of Contents and Table of Authorities. A complete copy of its response was filed on June 21, 2005. Correction to the NRC Staff Response to Nevada's Motion To Compel Production or Issue a Declaratory Order (June 21, 2005) [hereinafter NRC Staff Response].

[17] DOE Brief in Opposition at 15.

[18] NRC Staff Response at 1.

[19] NEI Brief in Opposition at 2.

[20] Nevada's Reply Brief in Support of Motion To Compel Production of Draft License Application (June 28, 2005) [hereinafter State Reply Brief].

[21] *See* Tr. at 441-574.

answers to which would materially improve the record and assist in resolving the issues before us. Accordingly, on July 18, 2005, we ordered DOE to file certain documents and to answer several questions.[22] DOE responded to the order on July 29, 2005.[23] On August 11, 2005, the State filed a response to DOE's response.[24]

B. Regulatory Background

The issues before us arise in the context of regulations enacted to assist the Commission in meeting the 3-year statutory deadline for issuing a final decision on DOE's application for a license to construct an HLW repository at Yucca Mountain, Nevada.[25] In order for NRC to complete this challenging assignment, the regulations require that DOE and other potential parties participate in a pre-license application document discovery phase during the period before NRC will ''docket'' DOE's license application. *See* 10 C.F.R. § 2.1012(a). During this pre-license application phase, DOE must make all of its documentary material pertaining to Yucca Mountain available on the LSN. *See* 10 C.F.R. § 2.1003(a)(1).

As discussed in LBP-04-20, 60 NRC 300, 311-12 (2004), ''documentary material'' is defined in the Commission's regulations to cover three categories of information: *Class 1 Reliance Documentary Material*: ''Any information upon which a party . . . intends to rely and/or to cite in support of its position in the proceeding''; *Class 2 Nonsupporting Documentary Material*: ''Any information that is known to, and in the possession of, or developed by the party that is relevant to, but does not support, that information or that party's position''; and *Class 3 Relevant Reports and Studies Documentary Material*: ''All reports and studies, prepared by or on behalf of the . . . party, including all related 'circulated drafts,' relevant to both the license application and the issues set forth in the Topical Guidelines in Regulatory Guide 3.69, regardless of whether they will be relied upon and/or cited by a party.'' 10 C.F.R. § 2.1001. The general rule is that if a document falls within any of these three classes of documentary material, then its full text must be made available on the LSN. *See* 10 C.F.R. §§ 2.1001, 2.1003(a)(1).

There are two relevant exceptions to this rule. First, the regulations exclude ''preliminary drafts.'' 10 C.F.R. § 2.1003(a)(1). This term is defined negatively as ''any nonfinal document that is not a circulated draft.'' 10 C.F.R. § 2.1001. For

---

[22] Licensing Board Order (Regarding State of Nevada's June 6, 2005 Motion) (July 18, 2005) (unpublished).

[23] [DOE]'s Response to the [PAPO] Board's July 18, 2005 Order (July 29, 2005) [hereinafter DOE Response].

[24] Nevada's Reply to [DOE]'s Response to the Board's July 18, 2005 Order (Aug. 11, 2005).

[25] Nuclear Waste Policy Act (NWPA) of 1982, § 114(d), 42 U.S.C. § 10134(d) (2000).

its part, ''circulated draft'' is defined as any ''nonfinal document circulated for supervisory concurrence or signature in which the original author or others in the concurrence process have non-concurred.'' *Id.* Thus, a document must meet at least five criteria in order to be a ''circulated draft'': (1) nonfinal, (2) circulated, (3) for supervisory (4) concurrence or signature, and (5) a nonconcurrence. *See infra* Part II.B.1-5. ''Circulated drafts'' are not eligible for the deliberative process privilege, *see* 10 C.F.R. § 2.1006(c), and unless otherwise privileged (e.g., litigation work product), must be produced in full text as documentary material. *See* 10 C.F.R. § 2.1003(a)(1). The status of the Draft LA as a ''circulated draft'' is a central issue in controversy.

The second exception is that a participant is not required to produce the full text of documentary material that is subject to a claim of privilege, but instead must produce only an electronic bibliographic header for the document. *See* 10 C.F.R. § 2.1003(a)(4)(i). Thus, if a document is protected by one of the NRC's ''traditional discovery privileges'' (e.g., the attorney-client privilege, the litigation work product privilege, or the deliberative process privilege), only its header need be made available on the LSN. *See* 10 C.F.R. § 2.1006; 54 Fed. Reg. 14,925, 14,935 (Apr. 14, 1989).

C. Factual Background

1. Origin and Delivery of July 2004 Draft LA

There is a long history underlying the Draft LA. In 1982, when the NWPA was enacted, DOE was charged with preparing and submitting an application to NRC for a license to construct a high-level waste (HLW) geologic repository.[26] As recounted in LBP-04-20, 60 NRC at 303-06, since 1982 DOE has spent many years and billions of dollars on this task. Then, in 2002, the Secretary of Energy recommended Yucca Mountain to the President for the HLW repository. *See* 67 Fed. Reg. 9048 (Feb. 27, 2002). The President then recommended Yucca Mountain to Congress. Over the State of Nevada's formal disapproval, the Congress responded by passing a joint resolution approving the development of Yucca Mountain as a repository. The President signed the joint resolution on July 23, 2002.[27] This event triggered the statutory requirement that DOE submit a license application to the NRC within 90 days (i.e., by October 21, 2002).[28]

---

[26] *See* NWPA of 1982, Pub. L. No. 97-425, Title I, §§ 112-114 (codified as amended at 42 U.S.C. §§ 10132-10134 (2000)).

[27] *See* Approval of Yucca Mountain Site, Pub. L. No. 107-200, 116 Stat. 735 (codified as amended at 42 U.S.C. § 10135 note (2000)).

[28] *See* NWPA of 1982, § 114(b) (codified as amended at 42 U.S.C. § 10134(b) (2000)).

DOE did not meet the statutory deadline, and instead set December 2004 as the target date for submitting its application. In May 2003, Dr. Margaret Chu, the Director of the DOE Office of Civilian Radioactive Waste Management (OCRWM), stated before the U.S. Nuclear Waste Technical Review Board (NWTRB), a statutorily created board tasked with reviewing the progress of the Yucca Mountain project,[29] that DOE was focused on submitting a ''high quality license application by December '04.''[30] Over the following 19 months, Dr. Chu and W. John Arthur III, the OCRWM Deputy Director for the Office of Repository Development (ORD), reiterated to the NWTRB that DOE planned to file the license application in December 2004 and reported on DOE's progress toward this goal.[31] To meet the December 2004 deadline, DOE anticipated it would make the necessary documentary material available in June 2004, when it would certify its LSN collection.[32] DOE nominally met this goal when it certified its LSN collection on June 30, 2004, although that certification was challenged and subsequently stricken. *See* LBP-04-20, 60 NRC at 300.

On July 26, 2004, Bechtel-SAIC Company, LLC (BSC), DOE's prime contractor for the Yucca Mountain project, delivered the approximately 5800-page[33] Draft LA to DOE.[34] This event, the ''Submission of a Complete Draft LA,'' was a major milestone under the DOE-BSC contract, which, if met, would entitle BSC to a performance-based incentive (PBI) fee of $11,043,476.[35] Producing a complete Draft LA in July was essential to DOE's ability to file the final license application in December.[36] Thereafter, the July 26, 2004 draft went through a

---

[29] *See* 42 U.S.C. §§ 10262-10263 (2000). Because the NWTRB is charged with reviewing DOE's technical and scientific activities relating to Yucca Mountain, senior DOE officials often address the board at NWTRB meetings and give updates on the status of DOE's application. NWTRB meeting transcripts are available at *http://www.nwtrb.gov/meetings/meetings.html.*

[30] *See* State Motion To Compel, Exh. 4, NWTRB, Spring Meeting Transcript (May 13, 2003) at 16.

[31] State Motion To Compel, Exh. 5, NWTRB, Fall 2003 Board Meeting Transcript (Sept. 16, 2003) at 15; Exh. 6, NWTRB, Repository Design Update Panel on the Engineered System Transcript (Jan. 20, 2004) at 16, 24, 27-28 [hereinafter 1/20/04 NWTRB Transcript]; Exh. 7, NWTRB, 2004 Spring Meeting Transcript (May 18, 2004) at 59-60, 64-65.

[32] 1/20/04 NWTRB Transcript at 24.

[33] Tr. at 551.

[34] DOE Brief in Opposition, Attach. B, Declaration of Joseph D. Ziegler (June 20, 2005), ¶ 2 [hereinafter Ziegler Decl.]; DOE Response at 1.

[35] DOE Brief in Opposition, Attach. A, DOE-BSC Contract, Modification No. A057 at B-6 to B-7 [hereinafter DOE-BSC Contract]. The Draft LA submitted by BSC apparently met DOE's requirements. *See* State Motion To Compel, Exh. 11, Steve Tetreault, *Yucca Mountain Contractor Qualifies for $11 Million Payment,* Pahrump Valley Times (Aug. 4, 2004). DOE did not, however, pay the PBI for the Draft LA because, due to supervening events, DOE and BSC subsequently renegotiated the contract, eliminating these milestones. DOE Brief in Opposition, Attach. C, Declaration of Kenneth W. Power (June 20, 2005), ¶¶ 2-3.

[36] *See* 1/20/04 NWTRB Transcript at 26-27.

review and iterative modification process,[37] resulting in what DOE called its ''second draft'' that was generated in November 2004.[38]

2. DOE's Draft LA Review Plan

DOE's technical and managerial review of the Draft LA was to be conducted pursuant to DOE's July 2004 License Application Management Plan (LAMP), which established the process and framework for the review process.[39] The key elements of the July LAMP included:

> *4.4.2. Technical Team Review Process*[40]
> [A] formal, multidisciplinary review consisting of BSC, ORD, RW headquarters, GC, EM (including NSNFP, NR, SO, EH, and USGS personnel . . . [including] meetings [to] provide information regarding the review schedule, review period, due date for comments, comment resolution period, and *final concurrence* on the sections being reviewed.
>
> . . . .
>
> *4.4.2.4 Technical Team Concurrence Review and Comment Resolution*
> [This involves review of] the *concurrence draft* to make sure the comments made by members of [the respective] organization[s] have been addressed satisfactorily [and] . . . [t]o facilitate *concurrence,* a comment resolution meeting . . . .
>
> . . . .
>
> *4.4.4.3. Resolution of Joint Comments*
> Following the joint chapter reviews, representatives from the ORD, NR, and BSC will attend a joint meeting . . . to resolve comments . . . [a]t the end of [which], *signed concurrence* will be obtained from representatives of each of the organizations that attended the meeting . . . . This *concurrence* will indicate agreement with the completeness and accuracy of the joint chapter review draft . . . as augmented by documented actions to be taken to resolve any outstanding issues.
>
> . . . .

---

[37] Tr. at 502.

[38] 2/9/05 NWTRB Transcript at 16.

[39] DOE Response at 6; Exh. C, DOE, OCRWM, Management Plan for Development of the Yucca Mountain License Application (July 2004) [hereinafter July LAMP].

[40] As used in the LAMP, ''RW headquarters'' refers to OCRWM; ''GC'' to the DOE Office of General Counsel; ''EM'' to the DOE Office of Environmental Management; ''NSNFP'' to the National Spent Nuclear Fuel Program; ''NR'' to Naval Reactors, DOE; ''SO'' to the DOE Office of Security; ''EH'' to the DOE Office of Environment, Safety, and Health; and ''USGS'' to the U.S. Geological Survey. July LAMP at xiii.

4.4.4.5 Final Concurrence
Once the changes resulting from the . . . joint chapter reviews have been incorporated [into the LA], . . . signature sheets . . . indicating *concurrence* with the resulting draft LA text will be obtained from the representatives of each organization . . . .

The production team will incorporate the changes from the *final concurrence* review and will prepare the LA for DOE headquarters.

. . . .

4.4.6 Submittal to DOE Headquarters
The ORD will submit the draft LA to DOE headquarters for review and *concurrence.*

. . . .

4.4.7.2 Signature of the OCRWM Deputy Director, ORD
After incorporation of the comments from the *final concurrence* review, the LA is provided to the OCRWM Deputy Director, ORD [i.e., the DOE official designated to sign the LA for filing with NRC].[41]

In September 2004, in the middle of DOE's review of the Draft LA, DOE revised its LAMP.[42] The September LAMP retained the Technical Team Review step,[43] the BSC and ORD Joint Chapter Review step,[44] and the DOE headquarters concurrence requirements.[45] However, the September LAMP deleted the ''Final Concurrence'' step from the July LAMP section 4.4.4.5 and in lieu thereof inserted the ''LA Completion'' step.[46] This step covered several elements, including a ''Joint Management Review,'' described as follows:

A final management review of the LA will be performed to assess the overall completeness and accuracy of the LA. LA sections will be evaluated to ensure actions of LA Open Items resulting from the chapter reviews have been adequately resolved. The joint management review will also evaluate the list of LA issues that have not been fully resolved or closed to ensure an acceptable path forward exists.

The joint management review team will be led by the Director of the OLAS; the OCRWM Deputy Director, ORD; and the Repository Development Manager,

[41] July LAMP at 13-17 (emphasis added).

[42] DOE Response at 6; Exh. D, DOE, OCRWM, Management Plan for Development of the Yucca Mountain License Application (Sept. 2004) [hereinafter September LAMP].

[43] September LAMP § 4.4.2.

[44] *See id.* § 4.4.3.

[45] *See id.* § 4.4.4.7.

[46] *See id.* § 4.4.4.

BSC. The joint management team will include full- or part-time participation by the following individuals or their designees:

> Director, OCRWM
> OCRWM Deputy Director, ORD
> General Manager, BSC
> Lead legal counsel
> Director, Office of Project Management and Engineering.[47]

The license application would be submitted to DOE ''headquarters'' for its review and concurrence *only after* the Joint Management Review and certain completion, validation, and certification activities.[48] At that point, the license application would be submitted to ''DOE headquarters [for] concurrence,''[49] for ''final concurrence,'' and for signature by the OCRWM Deputy Director ORD, W. John Arthur, III.[50]

3. DOE's Actual Review of the Draft LA

The record reflects that the Draft LA underwent all of the steps specified in the September LAMP up to, but not including, formal submission of the license application to DOE ''headquarters.'' The Draft LA or relevant portions of it were circulated to over ninety key supervisors and managers, including senior individuals such as Dr. Chu, Director, OCRWM; James Owendoff, Associate Director of Integration, OCRWM; Theodore Garrish, Deputy Director, Office of Strategy and Program Development, OCRWM; W. John Arthur, III, OCRWM Deputy Director, ORD; Joseph Ziegler, Director, Office of License Application Strategy, OCRWM; Storm Kauffman, Director, Reactor Safety and Analysis Division, Naval Nuclear Propulsion Program (NNPP); John McKenzie, Director, Regulatory Affairs Division, NNPP; Lee Liberman Otis, General Counsel, DOE; Gary Lavine, Deputy General Counsel, Environment & Nuclear Programs, DOE Office of General Counsel; DOE's outside counsel, Hunton & Williams; John Mitchell, General Manager of BSC; and Margaret McCullough, Deputy General Manager of BSC.[51]

It is also clear that some of these key managers and supervisors spent a considerable amount of time reviewing and commenting on the Draft LA. On September 20, 2004, Mr. Arthur, the DOE official designated to sign the final

---

[47] *Id.* § 4.4.4.3.
[48] *See id.* § 4.4.4.3 to -.5.
[49] *Id.* § 4.4.4.7.
[50] *Id.* § 4.4.5.2.
[51] DOE Response at 9-14; Exhs. J to M.

license application, stated that ''myself and a number of out [*sic*] senior managers have been spending continuously over the last three weeks, and it will complete in the next week and a half, the full review, integrated review of every section of that license [application] of the 70 subsections.''[52] At that same September meeting, Mr. Arthur's supervisor, Dr. Chu, assured the NWTRB that DOE was moving ahead at ''full speed'' and still on schedule to file the final license application in December 2004.[53] Later, Dr. Chu characterized DOE's activities as follows: ''You may remember that our Management and Operating contractor, BSC, delivered the first draft of the license application in July of 2004, and we reviewed the draft intensively, and made many comments . . . which were incorporated into our second draft, which was delivered to us in November of 2004.''[54]

More specifically, DOE's responses to several of our questions correlate DOE's review of the Draft LA with the various steps specified in DOE's license application management plans. First, the July 26, 2004 iteration of the Draft LA underwent and completed the ''Technical Team Review,'' including ''concurrence review and comment resolution.''[55] Second, DOE acknowledges that the Draft LA underwent and completed the ''Joint Chapter Review'' step specified in section 4.4.3 of the September LAMP.[56] This included joint DOE and BSC meetings, signed concurrences, and preparation of the license application for final concurrences.[57] DOE completed the Joint Chapter Review in August 2004.[58] DOE described its Technical Team Review and Joint Chapter Review as an ''iterative process,''[59] with ''new drafts of the various sections . . . emerging in September.''[60]

Next, the September iteration of the Draft LA underwent and completed the Joint Management Review step specified in section 4.4.4.3 of the September

---

[52] State Motion To Compel, Exh. 8, NWTRB, Fall Meeting Transcript (Sept. 20, 2004) at 42 [hereinafter 9/20/04 NWTRB Transcript].

[53] *Id.* at 31-32.

[54] 2/9/05 NWTRB Transcript at 16.

[55] *See* September LAMP §§ 4.4.2, 4.4.2.4. The fact that the Draft LA underwent and completed step 4.4.2, is demonstrated by DOE's acknowledgment that it underwent and completed the subsequent steps of 4.4.3 (Joint Chapter Review) and 4.4.4.3 (Joint Management Review).

[56] DOE Response at 7.

[57] *See* September LAMP §§ 4.4.3.3 to 4.4.3.4.

[58] Ziegler Decl. ¶ 5; DOE Response at 7.

[59] Tr. at 502-03.

[60] Tr. at 502. ''[S]et in motion then was the process for the author teams to look at the comments, respond to the comments. The responses could be literally adopting exactly what was said, or this iterative process back and forth discussing the comments. As the author teams and the technical review teams worked through that iterative process, new drafts of the various sections emerged, started emerging in September.'' *Id.* ''[T]he iterative process between the chapter authors and the review teams were ongoing in September.'' Tr. at 503.

LAMP.[61] As specified in Part I.C.2, this step consisted of a ''final joint management review of the LA'' by key senior officials including the OCRWM Director, the OCRWM Deputy Director, ORD, the Director of the DOE Office of License Application and Strategy, the General Manager of BSC, the lead legal counsel, and the Director of DOE's Office of Project Management and Engineering.[62] Mr. Arthur described this as follows: ''In September 2004 DOE and [BSC] completed a *major management review* of the draft LA. . . . Following the September management review, DOE and BSC produced an interim consolidated draft LA. This will form the basis for the final application.''[63] Mr. Ziegler stated that ''a *comprehensive management review* of the LA has been completed, and data qualification, software verification, and model validation are essentially complete.''[64]

During the Joint Chapter Review and the Joint Management Review, ''virtually everyone identified in response to Question 6 [i.e., the ninety-plus senior officials and managers] had some kind of comment — whether written or oral — . . . requesting that the draft license application be changed 'in some way.' ''[65] However, these comments ''were not systematically tracked to individuals.''[66] Not all of these comments or open items were resolved by November 22, 2004, and even now there remain some open items (''ongoing refinements'') for issues that arose before that date.[67] After the completion of the Joint Management Review in September 2004, DOE continued to work on the license application, to gather supporting information, to address open items, and to conduct various validation activities.[68]

DOE is adamant, however, that ''the license application was *not* submitted to DOE in October, 2004 for concurrence review as estimated in Figure 6 of the September 2004 [LAMP].''[69] Stated another way, the Draft LA did not formally

---

[61] DOE Response at 7.

[62] September LAMP § 4.4.4.3.

[63] DOE Response, Exh. P, Summary of the [NRC/DOE] Quarterly Management Meeting in Rockville, Maryland (Nov. 22, 2004), at 4 (emphasis added).

[64] *Id.* at 8 (emphasis added).

[65] DOE Response at 16.

[66] *Id.*

[67] *Id.* at 17.

[68] *See id.* at 8; September LAMP §§ 4.4.4.4 (Completion of Supporting Documents), 4.4.4.5 (Validation and Certification Activities).

[69] DOE Response at 8; *see also* DOE Response, Exh. E, Yucca Mountain Project License Application, Plan of Action and Milestones Draft (Oct. 15, 2004).

reach step 4.4.4.6 of the September LAMP, ''Preparations for LA Submittal to DOE Headquarters.''[70]

4. November Termination of Review of Draft LA

In November 2004, adverse developments in two cases, one in the courts and one before us, provided the *coup de grace* to DOE's plan to file its license application in December 2004. On July 9, 2004, the United States Court of Appeals for the District of Columbia Circuit had vacated the United States Environmental Protection Agency (EPA) radiation-exposure standard for Yucca Mountain. The EPA standard specified the key environmental criteria that any DOE license application must satisfy. The Court ruled that EPA's standard violated section 801 of the Energy Policy Act of 1992[71] because the regulatory 10,000-year compliance period was not ''based upon and consistent with'' the findings and recommendations of the National Academy of Sciences. *Nuclear Energy Institute v. Environmental Protection Agency,* 373 F.3d 1251, 1268-73 (D.C. Cir. 2004). On September 1, 2004, the D.C. Circuit denied both the request for rehearing and the request for rehearing *en banc, NEI v. EPA,* 373 F.3d at 1251, but there remained the possibility of Supreme Court review. Despite this setback, DOE proceeded with its review as scheduled, still planning to submit the license application in December 2004.[72]

Meanwhile, on August 31, 2004, we granted the State's motion challenging the sufficiency of the production of documentary material by DOE and striking DOE's certification regarding the availability of its documentary material on the LSN. *See* LBP-04-20, 60 NRC at 300. Without a valid June 2004 certification, the NRC could not docket DOE's license application, even if it were filed in

---

[70] *See* DOE Response at 8; September LAMP at 35, Fig. 6, ID 22. Although the Draft LA was never formally submitted to ''DOE headquarters'' for review and concurrence pursuant to step 4.4.4.6 of the September LAMP, DOE's answers make clear that the Draft LA was submitted to and reviewed by numerous high-level DOE officials who appear to be DOE *Headquarters* officials. These include Dr. Chu, the Director, OCRWM; James Owendoff, Associate Director of Integration; Theodore Garrish, Deputy Director, Office of Strategy and Program Development; John Arthur, OCRWM Deputy Director, ORD; Joseph Ziegler, Director, Office of License Application Strategy; Storm Kauffman, Director, Reactor Safety and Analysis Division (NNPP); John McKenzie, Director, Regulatory Affairs Division of the Naval Nuclear Propulsion Program (NNPP); Lee Liberman Otis, General Counsel DOE; and Gary Lavine, Deputy General Counsel, Environment & Nuclear Programs. This extensive ''Headquarters'' review indicates that the subsequent formal submission of the document to ''DOE Headquarters'' is more of a final formality than the arena where the substantive objections and issues are raised.

[71] Codified at 42 U.S.C. § 10141 note (2000).

[72] *See* 9/20/04 NWTRB Transcript at 31 (Dr. Chu assuring the NWTRB that DOE was still on schedule to file the final license application in December 2004).

December 2004. *See* 10 C.F.R. § 2.1012(a). DOE appealed a portion of the Board's decision.

In November 2004, both appeals — and any hope of DOE filing its license application in December 2004 — came to an end. On November 10, 2004, the Commission declined to reverse our August 31, 2004 decision and, instead, held DOE's appeal in abeyance. *See* CLI-04-32, 60 NRC 469 (2004).[73] Likewise, the deadline for filing a petition for a writ of certiorari to seek Supreme Court review of the D.C. Circuit's decision passed on November 30, 2004. In short, it became clear, just as DOE was on the verge of submitting its license application, that this timetable needed to be abandoned.[74] Until that moment, DOE pursued an aggressive and high-level review of the Draft LA, and produced a new draft of the license application in November 2004 that would have been ready for final DOE headquarters review and December 2004 submission.[75]

II. ANALYSIS

This case presents three broad issues relating to whether DOE must make the full text of its Draft LA available on the LSN at the time of its initial certification under 10 C.F.R. § 2.1009(b). The first concerns whether the Draft LA constitutes ''documentary material.'' The second focuses on whether the Draft LA is a ''circulated draft,'' which (unless otherwise privileged) must be on the LSN, or a ''preliminary draft,'' which need not. The third concerns whether the Draft LA is protected by the litigation work product privilege. For the reasons set forth in more detail in Parts A, B, and C, we conclude that the Draft LA is documentary material, is a circulated draft, and is not subject to any legitimate claim of privilege. Thus, DOE must make the Draft LA available when it certifies that all of its documentary material is on the LSN.

First, it is clear from the record before us that the Draft LA satisfies the second (i.e., nonsupporting material revealing potential weaknesses in DOE's position) and third (i.e., relevant reports and studies) prongs of the definition of documentary material. Second, the Draft LA meets the definition of a circulated draft because the record shows that it was a key document that was widely circulated to numerous senior DOE officials for their substantive agreement or ''concurrence,'' and that many of these individuals provided substantive

---

[73] We note that, because DOE appealed only one of the two independent grounds for our decision striking the certification, even if the Commission were to have ruled in DOE's favor, the certification could not have been reinstated.

[74] *See* State Motion To Compel, Exh. 9, Steve Tetreault, *DOE Revises Yucca Schedule: Application Won't Be Submitted by Dec. 31,* Las Vegas Rev.-J. (Nov. 23, 2004).

[75] *See* 2/9/05 NWTRB Transcript at 16-18.

comments that required that the Draft LA be changed before they would approve it (i.e., nonconcurrences). Finally, by failing to defend its assertion of the litigation work product privilege, DOE has waived it. In any event, the Draft LA does not qualify for the litigation work product privilege because it was prepared for the independent regulatory purpose of meeting NRC's license application requirements, *see* 10 C.F.R. §§ 63.21-63.24, and not because of an anticipated hearing or litigation.

A. Documentary Material

NRC regulations require that DOE make its documentary material available on the LSN, *see* 10 C.F.R. § 2.1003(a)(1), and divides ''documentary material'' into three classes: Class 1 ''reliance'' documentary material; Class 2 ''nonsupporting'' documentary material; and Class 3 ''relevant reports and studies'' documentary material. *See* 10 C.F.R. § 2.1001; Part I.B, *supra.* The State argues that the Draft LA fits all three classes of documentary material.[76] On the other hand, DOE insists that the Draft LA fails to fit within any of the three classes of documentary material.[77] Additionally, DOE makes the more general argument that the license application is not documentary material because it is instead a ''basic licensing document.''[78] We first address DOE's general argument regarding basic licensing documents before examining each of the three classes of documentary material.

1. Basic Licensing Documents

DOE maintains that the license application is not documentary material, but instead falls within a separate and distinct category of ''basic licensing documents'' for which there is no specific requirement to produce drafts.[79] DOE's argument is as follows: Under 10 C.F.R. § 2.1003(a), DOE must make its ''documentary material'' available on LSN. Under section 2.1003(b), DOE must also make its ''basic licensing documents'' available. To avoid making subsection (b) superfluous, ''documentary material'' and ''basic licensing documents'' must be mutually exclusive categories. Therefore, DOE reasons, because the license application is specifically listed in subsection (b) as a basic licensing document, it cannot also be documentary material.

We reject the argument that ''documentary material'' and ''basic licensing documents'' are mutually exclusive categories. Nothing in the language of the Subpart J regulations requires or supports this result. To the contrary, the definition

[76] State Motion To Compel at 4-7.

[77] DOE Brief in Opposition at 2-7.

[78] *Id.* at 2-3.

[79] *Id.*; Tr. at 489-94.

of ''documentary material'' counsels against such an interpretation because the documents listed in 10 C.F.R. § 2.1003(b) as examples of basic licensing documents (e.g., the environmental impact statement) are also specifically listed in the Topical Guidelines in Regulatory Guide 3.69 (Reg. Guide 3.69) as examples of documents that should be made available on the LSN, presumably under the Class 3 (relevant reports and studies) category.

In addition, the Commission made it clear that ''documentary material'' includes ''basic licensing documents'' when it stated that '' '[r]eports' and 'studies' [Class 3 documentary material] will also include the *basic documents relevant to licensing* such as the DOE EIS, the NRC Yucca Mountain Review Plan, as well as other reports or studies prepared by an LSN participant or its contractor.'' 69 Fed. Reg. 32,836, 32,843 (June 14, 2004) (emphasis added).

Thus, the regulation and the Commission's statement make clear that there is no mutually exclusive dichotomy between 10 C.F.R. § 2.1003(a) and (b). Instead, basic licensing documents are simply a subcategory of documentary material.[80] As we see it, subsection (b) is primarily intended to provide direction as to *who* is responsible for making these very large documents, which will be in the hands of multiple parties, electronically available on the LSN. The plain language of subsection (b) supports this conclusion, directing that basic licensing documents ''shall be made available in electronic form *by the respective agency that generated the document.*'' 10 C.F.R. § 2.1003(b) (emphasis added).[81]

---

[80] It should also be noted that accepting DOE's argument would result in an incongruous result under the Commission's pre-license application document discovery regulations. On the one hand, circulated drafts revealing nonconcurrences of DOE experts on relevant, but minor, technical reports and studies would be required to be disclosed through production on the LSN. On the other hand, circulated drafts revealing nonconcurrences on the Safety Analysis Report portion of the license application — the most critical license application document — seemingly would not be disclosed on the LSN. In drafting the regulations, we do not believe the Commission intended such an illogical result or one that is the very antithesis of ensuring public health and safety.

[81] In this regard, DOE also argues that requiring it to produce drafts of the license application creates a ''one-sided obligation'' because the State is not required to produce draft contentions, which ''certainly [would be] of interest to DOE and theoretically might be useful to rebut the State's positions in the license proceeding.'' DOE Brief in Opposition at 7. Similarly, DOE argues that ''[t]he public interest would benefit from having its license application be the most sound it can be, and the licensing proceeding could be facilitated if DOE could address contentions in the pre-license application phase.'' *Id.* at 18. Thus, according to DOE, ''[b]y the same logic that would obligate DOE to produce draft versions of its license application in conjunction with its initial LSN certification, the State and others should be required to share their draft contentions with DOE at this time.'' *Id.* The State notes, however, that it is not seeking a one-sided obligation and states in its brief (as it did at oral argument) that it fully intends to make the circulated drafts of its contentions available on the LSN. State Reply Brief at 17; Tr. at 473. Given that the State concedes that it intends to make ''circulated drafts'' of its contentions available on the LSN, there is no ''one-sided obligation'' imposed upon DOE in making the Draft LA available on the LSN.

2. Class 1 ''Reliance'' Documentary Material

Although it does not provide a separate analysis of Class 1 and Class 2 documentary material, the State claims two grounds on which the Draft LA is Class 1 ''reliance'' documentary material. First, the State argues that ''differences between the draft and final LA, would be something that a litigant would likely use to support its position and oppose DOE's position.''[82] Second, the State explains that the Draft LA contains the type of information that DOE is likely to rely upon because the Draft LA was a relatively complete draft which addressed all applicable regulatory requirements.[83] We disagree with the State's argument.

As to the State's first argument, it fundamentally misconstrues one element of the scope of the ''reliance category'' of documentary material. It applies to ''[a]ny information upon which a potential party . . . intends to rely and/or cite in support of its position in the proceeding.'' 10 C.F.R. § 2.1001. Whether or not a potential party intends to rely upon or to cite a document is determined from the perspective of the potential party that is producing the document on the LSN. Stated another way, the phrase ''potential party'' in this context means the producing party. This is the only logical interpretation, because it would be impossible for the producing party to know whether some unknown third party might later ''intend to rely and/or cite'' the document in support of the third party's unknown position. Accordingly, in this situation, the Draft LA is Class 1 documentary material only if DOE intends to rely upon it to support DOE's position in the proceeding. Whether, as the State asserts, some other potential party might cite or rely upon the document in the future is not relevant to its status as ''reliance'' documentary material when DOE is the producing party.

The State's second argument, i.e., that DOE is ''likely to rely'' on the information in the Draft LA and therefore that it should be classified as reliance documentary material, suffers from several defects. While it may be true that the Draft LA was used, and in some sense ''relied'' upon, by DOE for purposes of formulating the second draft, this is not the type of reliance required to constitute documentary material. It is implicit from DOE's arguments that it does not intend to rely upon or to cite the Draft LA ''in the proceeding.'' *See* 10 C.F.R. § 2.1001. Further, merely because there is a continuity of certain ''information'' between the Draft LA and the final license application does not render the Draft LA ''reliance'' category documentary material. The question is whether the producing party intends to rely upon or to cite the document in question, not just some of the information in it.[84]

---

[82] State Motion To Compel at 4.

[83] State Reply Brief at 5-6.

[84] Indeed, nothing could be more self-serving than to cite to your own drafts as support for your final document.

3. Class 2 ''Nonsupporting'' Documentary Material

The State also asserts that the Draft LA is Class 2 ''nonsupporting'' documentary material because ''differences between the draft and final LA, would be something that a litigant would likely use to support its position and [to] oppose DOE's position.''[85] The State explained at oral argument that a comparison between the Draft LA and the final license application would ''reveal the key differences that scientists had in the program or that scientists had with the politicians in the program.''[86]

DOE argues that the State's position asserting the differences between the Draft LA and the final license application is unavailing because the State's position is based on an ungrounded conclusory assertion[87] and because the final license application, not any draft license application, is what ''is at issue in [NRC] adjudications.''[88]

We conclude that the Draft LA constitutes ''nonsupporting'' documentary material, although for reasons somewhat different than those propounded by the State. The definition of this category is ''[a]ny information that is known to, and in the possession of, or developed by the party that is relevant to, but does not support, [Class 1] information or that party's position.'' 10 C.F.R. § 2.1001. As with ''reliance'' documentary material, whether or not a document fits the ''nonsupporting'' category is determined from the perspective of the potential party producing the document. Does the document ''not support'' the producer's information or position?[89] If so, it is nonsupporting documentary material.

In this case, we agree with the State that a comparison between the Draft LA and the final license application would likely identify potential safety and environmental difficulties, issues, and changes and thus would provide information that undermines, or at least does not support, DOE's ultimate position. In these circumstances, we conclude that the Draft LA provides information that ''is relevant to, but does not support,'' DOE's position and is ''nonsupporting'' documentary material.

---

[85] State Motion To Compel at 4.

[86] Tr. at 555.

[87] *See also* NEI Brief in Opposition at 5 (similarly arguing that the State ''offers nothing more than argument of counsel that the Draft LA 'would likely' be used by a litigant opposing [DOE]'s position'').

[88] DOE Brief in Opposition at 4 (citing *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 338 (1999)).

[89] This perspective is different from the one posed by the State, i.e., whether the document is ''something that a litigant would likely use to support its position and *oppose* DOE's position.'' State Motion To Compel at 4 (emphasis added). Nonsupporting documentary material covers documents that do not support the producer's position or information, not just those documents that support an opponent's position.

We reject DOE's argument that we should dismiss as ''conclusory'' the State's assertion about the key differences between the Draft LA and the final license application because the State has not identified these differences. It is obvious to any litigator that the differences between the draft and the final version of a document often reveal defects or difficulties that raise questions about the final version. It is equally obvious that it would be an inappropriate burden to require that the one challenging a failure to produce documentary material provide concrete factual support showing that the document, which the challenger has not seen, does not support its possessor's position.[90] Here, we believe that basic logic, as well as the State's description as to how it proposes to use DOE's Draft LA to oppose DOE's information or position, show that the Draft LA constitutes Class 2, nonsupporting documentary material.[91]

DOE's citation to *Oconee,* CLI-99-11, 49 NRC at 338, is inapposite, as that case stands merely for the proposition that petitioners may not wait for the NRC Staff's review to formulate contentions, but instead must base their contentions on the filed license application. In this case, the State is not seeking to delay filing its contentions until it receives more information. To the contrary, it is seeking to assure the full availability of documentary material during the pre-application discovery phase of this unique proceeding so that, when the final license application is filed, it may formulate more complete and detailed contentions alleging flaws in that document due to changes that may have occurred, for whatever reason, in the drafting process.[92]

---

[90] This is not a situation where there are other policy considerations, such as national security concerns, that require that a participant seeking to obtain a document show that there is a ''need to know'' the contents of the document. *See, e.g., Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-6, 59 NRC 62, 72-73 (2004) (holding a party's ''belief that the information is needed to provide context or background may have little or no bearing'' on a safeguards ''need-to-know'' determination because there is a ''strong interest in limiting access to safeguards and security information'').

[91] Before leaving the topic of ''reliance'' and ''nonsupporting'' documentary material, we point out that these categories will likely grow once the potential parties file contentions and the ''positions'' of the parties become known. For example, once a license application is docketed and contentions are filed, the Staff may take positions on them. Likewise, once contentions are known, DOE will respond and take certain positions. At this point, each of them will need to examine their documents, and to supplement, as appropriate, its production of documentary materials to include documents that contain information that it will rely upon, or that does not support it positions. *See* 69 Fed. Reg. at 32,843. Accordingly, even if a party makes a good faith production of all documentary material at the time of its initial certification, all potential parties are counseled to preserve other extant documents, until after contentions are filed and positions are known. *See* LBP-04-20, 60 NRC at 323-24.

[92] One of the primary reasons the Commission created the LSN and required early availability of documentary material was to allow ''the comprehensive and early review of the millions of pages of relevant licensing material by the potential parties to the proceeding, so as to permit the

(Continued)

4. Class 3 ''Relevant Reports and Studies'' Documentary Material

The State asserts that the Draft LA is Class 3 ''relevant report and study'' documentary material because the Draft LA is relevant to the final license application and also to the issues set forth in the Topical Guidelines in Regulatory Guide 3.69 (Reg. Guide 3.69).[93] DOE contests the State's designation of the Draft LA as ''relevant report and study'' material because, it alleges, interpreting the Draft LA as being relevant to the license application results in a convoluted reading of the regulations and because Reg. Guide 3.69 fails to list the Draft LA among the documents required to be on the LSN.[94] We reject both of DOE's arguments and find that the Draft LA is ''relevant report and study'' documentary material.

The heart of any license application, and necessarily the Draft LA, is the Safety Analysis Report (SAR). The NRC's Yucca Mountain Review Plan, which ''anticipates the form and substance of the DOE license application,''[95] devotes about 90% of its table of contents and substantive text to providing guidance on how the NRC Staff will evaluate the SAR.[96] Given the importance with which the Staff views the SAR, it is clear that it is relevant to the final license application and, therefore, is Class 3 documentary material. This result is supported by the regulatory history previously discussed in Part II.A.1, where the Commission states that '' '[r]eports' and 'studies' will also include the basic documents relevant to licensing.''[97] In fact, there is probably not a document in DOE's possession that is more basic or more relevant to licensing than the SAR.

DOE also asserts that lumping the license application into Class 3 documentary material requires ''[s]ubstitution of the phrase 'license application' for 'reports and studies' in the pertinent regulatory text,'' resulting in a definition that reads:

---

earlier submission of better focused contentions resulting in a substantial saving of time during the proceeding.'' 53 Fed. Reg. 14,925, 14,926 (Apr. 14, 1989). As the Commission stated just last year:

> [T]he history of the LSN and its predecessor, the Licensing Support System, makes it apparent it was the Commission's expectation that the LSN, among other things, would provide potential participants with the opportunity to frame focused and meaningful contentions and to avoid the delay potentially associated with document discovery, by requiring parties and potential parties to the proceeding to make all their Subpart J-defined documentary material available through the LSN prior to the submission of the DOE application. These objectives are still operational.

69 Fed. Reg. at 32,843.

[93] State Motion To Compel at 4.

[94] DOE Brief in Opposition at 5-6.

[95] 69 Fed. Reg. at 32,843.

[96] NUREG-1804, ''Yucca Mountain Review Plan,'' at v-xiii (Rev. 2, July 2003). *Cf.* Reg. Guide 3.69 at 3.69-3 to -6.

[97] 69 Fed. Reg. at 32,843.

''All license applications . . . relevant to . . . the license application . . . .''[98] DOE insists that, if the Commission truly intended for the license application to be documentary material, it would have said so in plain English instead of relying upon such a ''convoluted, circular and senseless'' reading of its regulations.[99] DOE's substitution of ''license application'' for ''reports and studies'' is inapt. Instead, the proper phrase to substitute is ''draft license application,'' which gives the entirely sensible resulting reading of: ''All draft license applications . . . relevant to . . . the license application . . . .'' This reading is entirely appropriate, as also would be a substitution of ''Safety Analysis Report'' for ''reports and studies.''

We also find that the Draft LA is relevant to the issues set forth in Reg. Guide 3.69, which ''defines the scope of documentary material that should be . . . made available via the LSN.''[100] Appendix A to Reg. Guide 3.69 lists examples of the types of documents that should be made available on the LSN and specifically includes the license application.[101] It follows that, if the license application is a type of document that must be on the LSN, then any circulated draft of that same document must also be made available on the LSN. DOE argues otherwise, asserting that, because Appendix A mentions the ''license application'' but does not mention ''drafts'' of the license application, this means that drafts are excluded and thus the Draft LA need not be made available on the LSN.[102] This argument, however, is in direct contravention of the instruction in Reg. Guide 3.69 that Appendix A is a ''nonexhaustive list of types of documents that may be included in the LSN.''[103] Appendix A merely provides examples of the types of documents that are to be on the LSN, making it improper to rely on the absence of a specific example to suggest a document need not be made available.[104]

---

[98] DOE Brief in Opposition at 5.

[99] *See id.*

[100] Reg. Guide 3.69 at 3.69-1.

[101] *Id.* at 3.69-7.

[102] DOE Brief in Opposition at 6.

[103] Reg. Guide 3.69 at 3.69-2.

[104] Although DOE has apparently abandoned the claim, its original denial of the State's request for the Draft LA stated that the license application is not documentary material because it ''cites and relies on the 'information' that constitutes the documentary material.'' DOE Denial Letter at 2. Essentially, DOE was arguing that the Draft LA is not a ''relevant report and study'' because it cites and relies upon relevant reports and studies. Nothing in the definition of documentary material prevents a document that compiles other reports and studies into a single document from also being a report or a study.

B. Circulated Draft Analysis

The regulations parenthetically deal with the production of drafts, stating that parties shall make available ''all documentary material (including circulated drafts but excluding preliminary drafts).'' 10 C.F.R. § 2.1003(a)(1). This cursory statement sets up the dichotomy between preliminary drafts and circulated drafts, which are mutually exclusive. As previously noted, a ''preliminary draft'' is ''any nonfinal document that is not a circulated draft.'' 10 C.F.R. § 2.1001. The term ''circulated draft'' is more substantively defined as ''a nonfinal document circulated for supervisory concurrence or signature in which the original author or others in the concurrence process have non-concurred.'' *Id.*[105] This definition can be broken into five essential elements requiring: (1) a nonfinal document (2) that has been circulated (3) to supervisors (4) for the purposes of concurrence or signature and (5) in which the original author or others in the concurrence process have nonconcurred. None of these elements is further defined or clarified in the regulations. We address each of these elements in turn as applicable to the Draft LA.

1. Nonfinal Document

Although the regulations do not define the phrase ''nonfinal document,'' the Statement of Considerations for the initial Subpart J rule gives an example of a final document as one ''bearing the signature of an employee of an LSS participant or its contractors.'' 54 Fed. Reg. 14,925, 14,934 (Apr. 14, 1989). Documents signed by the potential party or its contractors are ''final.'' However, even documents without a signature, such as memoranda and e-mails, if finalized, treated as final, or delivered to the intended addressees, can be final documents. Thus, for example, the written comments by the ninety-plus reviewers of the Draft LA are presumably final documents, even if the Draft LA is not.[106] In this case, all parties seem to accept that the Draft LA is a nonfinal document.

---

[105] As DOE indicates, Tr. at 531, there is nothing in the regulatory definition of a circulated draft that precludes there from being more than one such draft of a nonfinal document.

[106] *See* Minutes of the [Sixth] HLW Licensing Support System [LSS] Advisory Committee Meeting: April 18-19, 1988 (May 31, 1988) at 4, ADAMS Accession No. ML012050034 (DOE stated that it ''intended to include the concurrence sheets which summarized suggested revisions to the document, as well as any memoranda which commented upon the draft document''). The initial Subpart J regulations dealing with the LSS (the predecessor system to the LSN) and related discovery were the product of a negotiated rulemaking that was subsequently adopted, in large part, by the Commission. Consequently, with the exception of those portions of the negotiated rule not accepted by the Commission, which are not involved here, the minutes of the LSS Advisory Committee provide the greatest insight into the drafters' intended meaning in the regulatory history. Those minutes are publicly available on the NRC electronic agency record systems, ADAMS.

2. Circulated

Here again, the record is clear that the Draft LA was widely distributed and circulated. As earlier discussed in Part I.C.3, DOE sent the July and September iterations of the Draft LA to numerous individuals.[107]

In this regard, we reject DOE's suggestion that, because the July 26, 2004 iteration of the Draft LA was modified during the Technical Team Review in September before it was circulated for further review by senior management for the Joint Chapter Review Step and the Joint Management Review Step, the State's motion must fail for having asked for a draft with the wrong date (i.e., arguing that the July iteration was not circulated to management, whereas the September iteration was).[108] DOE has acknowledged that the Draft LA was evolving, in an iterative process with large and small changes, perhaps daily, during the period from July 26, 2004, until November 2004,[109] when DOE generated what Dr. Chu, the Director of OCRWM, described as the ''second draft.''[110] DOE's logic leads to the strained and unnecessary conclusion that each daily iteration is a different ''draft,'' and the document requestor automatically loses unless it asks precisely for the iteration dated the same day as it was ''circulated'' to management. The requestor has no way of knowing the precise date. Nor would it make any sense to deny the current motion to compel on the grounds that the ''July Draft'' was not circulated to management, when the State could immediately file a request for, as DOE would now have it, the ''September draft.'' We reject this approach and instead interpret the State of Nevada's request in a practical manner, consistent with DOE's own position that a ''second draft'' did not arise until November, as covering the July 26, 2004 iteration (which was clearly a major milestone and deliverable) and its September interim iteration, but excluding the November 2004 draft. Any other approach would result in endless subparsing of daily ''drafts.''[111]

3. Supervisory

The regulation specifies that a circulated draft is circulated for ''supervisory'' concurrence, 10 C.F.R. § 2.1001, but does not define the term ''supervisory.'' The Statement of Considerations merely adds that the regulation is intended

---

[107] DOE Response at 9-15.

[108] Tr. at 502-04.

[109] *Id.*

[110] 2/9/05 NWTRB Transcript at 16.

[111] The fact that DOE did not send the September iteration back to the beginning of its review process (i.e., restart the review entirely) further demonstrates that it should not be considered a new draft but rather was a continuation of the review of the same draft.

to capture documents that have been subjected to ''management review.'' 54 Fed. Reg. at 14,934. *Webster's Third New International Dictionary* 1372, 2296 (1993), defines ''manager'' as ''one that manages'' and ''supervisor'' as ''one that supervises a person, group, department, organization, or operation.'' Under either definition, it is clear to us that a substantial number of the individuals listed by DOE in response to Question 6 of our July 18, 2005 order asking, *inter alia,* for the name, title, and organization of the supervisors and managers to whom the Draft LA was distributed, are ''supervisors'' within the meaning of the definition of ''circulated draft.'' The fact that not all of these individuals reviewed the entire draft merely demonstrates the document's size and complexity and does not negate the fact that supervisors reviewed part or all of the Draft LA.[112]

4. Concurrence or Signature

The *purpose* of circulating the Draft LA to DOE managers and supervisors is where the real controversy begins. DOE asserts that a draft becomes a circulated draft only if it is distributed for the ''special'' and ''narrow'' purpose of supervisory concurrence or signature.[113] Describing this as an ''exacting requirement,'' DOE states:

> Distribution of a draft for comments, even to a supervisor, is not sufficient. The document must have reached the point where the document is distributed *for approval* in the form of concurrence or signature. Further, comments on a draft are not sufficient, even where the draft was distributed for supervisory concurrence or signature.[114]

DOE goes on to assert that the Draft LA plainly does not qualify as a circulated draft under these standards, arguing that it was merely an ''incomplete'' draft in an ''active state of revision,'' circulated for ''multidisciplinary working-level review, referred to as 'chapter review' by technical review teams.''[115] DOE acknowledges that its Deputy Director, ORD, and its Director of OLAS, ORD, ''read various parts'' of the Draft LA, but insists this was done only to ''apprise themselves of the license application's general state of preparation'' and not for the purpose of their concurrence or signature.[116] DOE also argues that the fact that the July 2004 draft was modified to conform to some of DOE's internal objections demonstrates that it was not a circulated draft and adds that, if the

---

[112] *See* Tr. at 551.

[113] DOE Brief in Opposition at 8, 11-12.

[114] *Id.* at 8 (emphasis added); *see also* Ziegler Decl. at 2.

[115] DOE Brief in Opposition at 10.

[116] *Id.* at 10-11.

State's arguments were accepted, ''essentially every draft would qualify as a 'circulated draft' . . . effectively writ[ing] out of existence the exclusion for preliminary drafts.''[117]

The State rejects DOE's argument that distributing a draft ''for supervisory concurrence'' is limited to some ''acutely formal process'' because, according to the State, it would allow any party to ''create an artificial internal review process that effectively eliminates the possibility of there ever being any circulated drafts.''[118] The State asserts:

> The ordinary definition of concur is ''agree,'' ''assent to,'' ''go along with,'' or ''accept.'' A concurrence process for a document is simply a process whereby the author of a document and others are asked by supervisors whether they agree, accept or go along with the document in question. Someone has ''non-concurred,'' if he or she has not agreed, accepted, or gone along with the document in question.[119]

The State further maintains that the Draft LA meets all of the criteria of a circulated draft and the fact that DOE ''artificially refused'' to call its ''chapter review process'' a ''concurrence process'' ''elevates form over substance.''[120] The State points out that DOE's own earlier Project Summary Schedules ''mandate the word 'concurrence' at each successive level of DOE review.''[121]

Our analysis of this issue starts with the word ''concurrence,'' which appears, in some form, three times in the definition of circulated draft. A circulated draft is a nonfinal document circulated for supervisory ''concurrence'' or signature, in which the original author or others in the ''concurrence'' process have ''nonconcurred.'' 10 C.F.R. § 2.1001. Unfortunately, the key term — concurrence — is never defined. Instead, we are left to glean its definition from its plain meaning, the structure of the regulation, and then, if appropriate, the regulatory history.

First, given that the regulation speaks in terms of a document being circulated for ''concurrence or signature,'' 10 C.F.R. § 2.1001, it is clear that ''concurrence'' does not mean ''signature.'' Thus, ''concurrence'' is not limited to the final formal signature or initialing step when a document is circulated up a management chain,

---

[117] *Id.* at 14.

[118] State Reply Brief at 10. Indeed, the State includes as Exhibit 3 to its motion to compel a January 8, 1993 DOE interoffice memorandum addressing whether a OCRWM record procedure has done just that. As characterized by the State, the memo author opines ''that when a document cannot proceed through internal review without resolution of comments it is a circulated draft even though no formal concurrence process is identified because 'what you have here, effectively, is something that is quacking just like the duck that HQ and the rule calls a circulated draft.' '' State Motion To Compel at 8 & Exh. 3.

[119] State Reply Brief at 10-11.

[120] *Id.* at 11.

[121] *Id.*

with each manager signing or initialing the document in boxes at the bottom until final execution and signature by the most senior official. Turning to the Statement of Considerations issued when this regulation was promulgated,[122] a parenthetical phrase seems to equate ''concurrence process'' with ''management review process.''[123] The Commission goes on to state: ''Although many of the LSS participants or their contractors do not have the same type of concurrence process as DOE and NRC, the Commission expects all LSS participants to make a good faith effort to apply the intent of this provision to their document approval process.''[124] Again, unfortunately, the regulatory history fails to delineate the ''type of concurrence process'' to which the Commission is referring.[125] Later in the same Statement of Considerations, the Commission refers to the circulated draft being subjected to an ''internal decision-making process.''[126]

---

[122] The Statement of Considerations discussion for the proposed regulation concerning circulated drafts, 53 Fed. Reg. 44,411, 44,415 (Nov. 3, 1988) and for the final regulation, 54 Fed. Reg. at 14,934, are identical, consisting of two paragraphs. These two paragraphs are virtually identical to two paragraphs developed during the regulatory negotiation that preceded this rulemaking.

[123] 54 Fed. Reg. at 14,934 (''[t]he intent . . . is to capture those documents to which there has been an unresolved objection . . . in the internal management review process (the concurrence process)''); Minutes of the [Sixth] HLW Licensing Support System Advisory Committee Meeting: April 18-19, 1988 (May 31, 1988), at 4-5, ADAMS Accession No. ML012050034 (''concurrence draft,' has a particular meaning in the parlance of DOE's record management system'').

[124] 54 Fed. Reg. at 14,934.

[125] At our request, DOE provided us with a copy of the concurrence procedure it had in effect in 1988. *See* DOE Response, Exh. A, Department of Energy *Correspondence* Manual, DOE Order 1325.1A (emphasis added). The title and substance of this Manual reveal that it is intended for correspondence — a short document with short turnaround — not a 5000-plus page license application years in the making. Nevertheless, the Manual states that concurrences ''indicate *agreement with the concept* of the response and how it is written,'' whereas nonconcurrences ''are directed to the *entire concept* of the response and not to how the response is written.'' *Id.* at VI-2 (emphasis added). As set forth *infra,* we agree that the terms concurrence and nonconcurrence focus on the concepts or substance in a document, not editorial suggestions as to ''how it is written.'' However, we reject DOE's argument that a nonconcurrence occurs only if someone disagrees with the ''entire concept'' of the Draft LA. DOE Response at 4. Although the DOE Manual may make sense as applied to items such as correspondence, it is nonsense when applied to the Draft LA. If there is anyone at DOE in 2004 who challenged the ''entire concept'' of submitting a license application for the HLW repository, he or she either has not read the statutory mandates of the NWPA or is ready for the Don Quixote Rest Home for Former DOE Officials. In any event, DOE itself acknowledges that DOE Order 1325.1A did not establish the concurrence process applicable to the Draft LA, which instead was governed by the July LAMP, the September LAMP, and DOE Response, Exh. E, Yucca Mountain Project — License Application Plan of Action and Milestones — Draft (October 15, 2004). *See* DOE Response at 6.

[126] 54 Fed. Reg. at 14,934.

Based on these indicia, we conclude that the term ''concurrence'' should be given its plain meaning, i.e., ''agreement'' or ''approval.''[127] A document that is circulated for ''concurrence'' is circulated for substantive agreement or approval. DOE acknowledges this point by stating that a document is circulated for supervisory concurrence when it has ''reached the point where the document is distributed for approval.''[128] The State supports using the ordinary definition of concur — to ''agree.''[129] Similarly, we construe the term ''concurrence process'' as used in 10 C.F.R. § 2.1001 as a process whereby management reviews the document for substantive agreement or disagreement. An ''author or others in the concurrence process have non-concurred'' within the meaning of that section when they have raised a substantive comment or objection that they think needs to be corrected or changed before the document goes further or is finalized.

We believe that the regulatory phrase ''concurrence process'' refers to a serious management review of a document perceived to be approaching final form, and the phrase ''non-concur'' refers to a concern, comment, or objection seeking a substantive change. We reject any suggestion that the concurrence process can refer only to the bureaucracy's final sign-off sheet, must take a special narrow form, or must be expressly labeled as a ''concurrence process.'' It would allow any party to establish an artificial ''final'' concurrence step that would avoid the production of any circulated drafts.

Likewise, we refuse to accept that the concept of circulated draft (i.e., whether the document was circulated ''for . . . concurrence'') hinges upon the subjective intent of the person who circulated it or to the after-the-fact labels applied to the process. Instead, in determining whether a ''concurrence process'' has occurred, we look to objective factors such as whether the document is a significant, well-developed, mostly complete draft; the nature and extent of management review devoted to the document; and whether the management review was for the purpose of agreement on the substance of the draft. In determining whether there has been a ''nonconcurrence,'' we look at whether a supervisor or manager, or the original authors or others in the concurrence process, whose approval would be requested before the document could be finalized, provided comments that seek substantive, not just editorial, changes in the document. If so, such substantive comments, however labeled, are, in fact, deemed to be ''nonconcurrences.'' There is no regulatory dictate that we narrowly limit the term ''concurrence process'' to a formalistic, final sign-off sheet, or require that ''nonconcurrences'' must be expressly labeled as such, for any such interpretation would reward form over

---

[127] *See Webster's Third New International Dictionary* 472 (1993) (defining ''concurrence'' as meaning ''agreement or union in action'' and ''agreement in opinion,'' and ''concur'' as meaning ''approve'' or ''agree'').

[128] DOE Brief in Opposition at 8.

[129] State Reply Brief at 10.

substance and allow potential parties to design and implement processes that could easily prevent the existence of any ''circulated drafts,'' except those that are identical to the final document.

Applying the foregoing criteria to the Draft LA, we conclude that it was ''circulated for supervisory concurrence.'' The Draft LA was the first full and consolidated version of DOE's license application and a major deliverable by BSC to DOE.[130] Until November 22, 2004, DOE was still using the Draft LA as the operative version of the license application that DOE planned to file with NRC in December 2004. DOE obviously treated the Draft LA with utmost gravity, urgency, and importance, distributing the document to over ninety managers and supervisors, including many very senior DOE officials as well as innumerable other technical and editorial reviewers.[131] The Draft LA was treated as the penultimate document. DOE's License Application Management Plans of July and September 2004 laid out careful, thorough, and formal review processes for the Draft LA.[132] The Technical Team Review was ''formal,'' ''multidisciplinary,'' and involved ''concurrence review.''[133] The BSC and ORD Joint Chapter Reviews involved ''signed concurrences.''[134] The ''Joint Management Review,'' involved some of the most senior DOE officials assessing the overall completeness and accuracy of the Draft LA for, *inter alia,* resolving open items to ensure an acceptable path forward.[135] As recounted in Part I.C.3, numerous senior officials, including the one official specifically designated to sign the final license application, spent many weeks poring over the Draft LA. This was ''a comprehensive management review of the LA.''[136]

DOE acknowledges that the Draft LA was widely circulated to senior management, but nonetheless argues that this distribution was not *for the purpose of concurrence* or signature, and therefore the Draft LA cannot be a circulated draft.[137] Applying any realistic interpretation of the term ''concurrence,'' DOE's position is untenable. When we asked DOE to specify, for each of the ninety plus managers and supervisors who reviewed the Draft LA, ''those who submitted a mandatory comment or comment requesting or requiring that the Draft License Application be changed in any way,'' DOE answered ''virtually everyone . . . had some kind of comment — whether written or oral — at least requesting that

---

[130] *See* 2/9/05 NWTRB Transcript at 16.

[131] DOE Response at 9-15.

[132] *See* Part I.C.2, *supra.*

[133] July LAMP §§ 4.4.2, 4.4.2.4.

[134] *Id.* § 4.4.4.3.

[135] September LAMP § 4.4.4.3.

[136] DOE Response, Exh. P, Summary of the [NRC/DOE] Quarterly Management Meeting in Rockville, Maryland (Nov. 22, 2004) at 8 (emphasis added).

[137] Tr. at 505-06; Ziegler Decl. ¶ 4.

the draft license application be changed 'in some way.' ''[138] It thus appears to us that these senior officials participated in this process as a serious and formal review pursuant to the formal License Application Management Plan and provided substantive comments on the Draft LA requesting or suggesting substantive modifications to the document. Senior officials do not need to shout or to label their comments as ''nonconcurrences'' for underlings to get the point. Whether stated or not, the comments of DOE management represented their agreement, or not, to the Draft LA, and serious consideration and response to management's substantive comments was an implicit, if not explicit, condition of management approval. This is the way that many bureaucracies, whether governmental or corporate, review major documents.

In short, the Draft LA underwent a major and very serious approval process, i.e., a concurrence process. That the July and September LAMPs repeatedly use the word ''concurrence'' to describe the process that the Draft LA underwent simply underscores this conclusion. That the Draft LA never reached the formal step of submittal to ''DOE headquarters for concurrence,''[139] does not change the reality that the Draft LA had already been reviewed for approval, agreement, or ''concurrence'' by many very senior managers (many from DOE ''headquarters'').

5. Nonconcurrence

The definition of the circulated draft requires that it be a document in which the original author or others in the concurrence process have ''non-concurred.'' 10 C.F.R. § 2.1001. As discussed above, we interpret the word ''nonconcurrence'' in a practical way to mean a comment or objection indicating significant, substantive nonagreement with the draft in question, i.e., a nonagreement requiring a substantive change in the document before the individual in question agrees with or will approve it. It needs to be ''formal'' in the sense that it must be substantive and serious, but need not bear the label of ''nonconcurrence'' or some other formalistic name.[140] DOE acknowledges that virtually all of the managers and supervisors in the review process had such substantive comments requiring at least some changes in the Draft LA, and that these comments were generated in a formal License Application Management Plan process, with numerous levels of review, ''story boards,'' concurrence resolution meetings, and continual

---

[138] DOE Response at 16.

[139] *See* September LAMP § 4.4.4.6.

[140] *See* Minutes of the [Ninth] HLW Licensing Support System Advisory Committee Meeting: July 20-21, 1988 (Sept. 12, 1988) at 12, ADAMS Accession No. ML012050071 (''the Committee agreed to delete the reference to 'written objections' in the discussion of the definition of 'circulated draft' . . . since the Committee had agreed to drop this requirement in the rule itself'').

iterations. That being so, we conclude that these substantive comments from key individuals constituted ''nonconcurrences'' in some aspect of the Draft LA. The label placed on the comment, whether it be ''nonconcurrence,'' ''mandatory comment,'' or ''formal objection,'' is not determinative. A comment requiring substantive change to the circulated document as a condition to agreement or further approval of it, is the essential concept. Here, we are satisfied that this element of the definition of 10 C.F.R. § 2.1001 has been met for the Draft LA.[141]

6. Two Additional, Non-Regulatory Criteria?

We conclude that the Draft LA satisfies all five of the elements of the regulatory definition of ''circulated draft.'' The Draft LA is (a) a nonfinal document, (b) it was circulated (c) to supervisors or management, (d) for supervisory concurrence, and (e) the original author or others in the concurrence process have nonconcurred. *See* 10 C.F.R. § 2.1001. Presumably, this should be enough.

However, DOE and the NRC Staff argue that a document cannot be deemed a circulated draft unless it meets two additional criteria. First, they point out that the Statement of Considerations states that ''[t]he intent of this exception to the general rule or [*sic*] final documents is to capture those documents to which there has been an *unresolved* objection,'' and ''[t]he objection or non-concurrence must be *unresolved.*''[142] Second, they cite the regulatory history for the proposition that the regulations ''do not require a LSS participant to submit a circulated draft to the LSS *while the internal decision-making process is still ongoing.*''[143] DOE and the NRC Staff argue that the Draft LA must satisfy both of these additional criteria — the nonconcurrence is unresolved and decisionmaking is complete — before it can qualify as a circulated draft.

As an initial matter, where the language of the regulation is clear, it is unnecessary and improper to modify it by resorting to entirely extraneous statements in

---

[141] Even DOE's facile, but ultimately affirmative, answer to our question as to whether DOE management submitted comments requiring substantive changes in the Draft LA (Question 6), (i.e., ''virtually everyone'' had such a comment), is sufficient. We did not ask DOE to ''unscramble the egg'' or reconstruct the entire process. DOE was the only party with knowledge of the facts as to what happened to the draft. Once it acknowledged that management submitted comments requiring substantive changes to the Draft LA, it was DOE's burden to show that these were *not* nonconcurrences, e.g., that DOE senior managers would have approved the draft even if their comments were ignored.

[142] 54 Fed. Reg. at 14,934 (emphasis added); *see* DOE Brief in Opposition at 8-9; NRC Staff Response at 4.

[143] 54 Fed. Reg. at 14,934 (emphasis added); *see* DOE Brief in Opposition at 12; NRC Staff Response at 5.

the Statement of Considerations.[144] Here the regulatory terms ''concurrence'' and ''nonconcur'' are undefined but the plain meaning of these terms is sufficient to resolve fully the questions of interpretation. *See* Part II.B.4, *supra.* Even if we were to examine the two Statement of Considerations points cited by DOE and the NRC Staff, they provide no clarification of these terms. Instead, they merely purport to add two entirely new requirements to the concept of ''circulated draft.'' The term ''unresolved'' specifies the status of a nonconcurrence, but does not assist in defining the terms ''concurrence'' or ''nonconcur.'' Likewise, requiring that a decisionmaking process be complete adds a new element, but does not define or clarify the meaning of the terms ''concurrence'' or ''nonconcur.'' In these circumstances, we may not appropriately consult the Statement of Considerations, and have no legitimate basis upon which to engraft these two additional requirements onto the regulatory definition of ''circulated draft.''

Further, these concepts are inconsistent with the regulation, mutually contradictory, and difficult, if not impractical, to administer realistically. First, the passage in the Statement of Considerations indicating that the nonconcurrence must *be* unresolved, is inconsistent with the words of the regulation, which speaks in the past tense and states that a person must ''*have* non-concurred.'' 10 C.F.R. § 2.1001 (emphasis added). Under the regulation, it is sufficient if a nonconcurrence occurred during the review process. But mandating, as DOE and the NRC Staff would have it, that the nonconcurrence *be* unresolved requires that, at the relevant point in time, a person *is still* nonconcurring. This is contrary to the wording of the regulation.

Second, the two Statement of Considerations concepts are contradictory. On the one hand, it is said that the nonconcurrence must be unresolved. On the other, we are told the decisionmaking process must be complete. But if the decisionmaking process is complete, then, of necessity, all nonconcurrences must have been resolved — a final decision has been made, either accepting the point of the nonconcurrence or overruling whatever objections may have been raised, and thereby resolving all disputes. This contradiction means that it is not possible to satisfy both of these nonregulatory criteria at the same time, and thus there could

[144] *See Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-05-15, 61 NRC 365, 373-74 (2005) (turning to the Statement of Considerations only after finding dictionary definitions insufficient to resolve questions of interpretation); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-900, 28 NRC 275, 288 (1988) (''Although administrative history and other available guidance may be consulted for background information and the resolution of ambiguities in a regulation's language, its interpretation may not conflict with the plain meaning of the wording used in that regulation''). *Cf. Chevron, U.S.A., Inc. v. Natural Resources Defense Council,* 467 U.S. 837, 842-43 (1984) (''If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress'').

never be a draft that meets both criteria, i.e., there can never be a ''circulated draft.'' This cannot be the intent of the regulation.[145]

Further support for our conclusion is found in the fact that the procedures established by DOE for raising objections and nonconcurrences concerning the draft license application do not even contemplate the possibility that any comment or nonconcurrence could remain unresolved.[146] In every case, the LAMPs assume as a given that the nonconcurrences will be resolved.[147] The DOE system does not permit an unresolved nonconcurrence on the license application.

In any event, if these criteria are appropriate for consideration at all, because DOE is the party with the relevant information, DOE should bear the burden of showing that all of the nonconcurrences to the Draft LA have been resolved. We raised this matter with DOE on July 18, 2005. It acknowledged that, as of November 22, 2004, the date when work on the Draft LA was abruptly halted, there were still a number of open items arising from the substantive comments received during the management review.[148] DOE further acknowledged that some of these items are still open today.[149] Accordingly, we find that at least some of the nonconcurrences were, and still are, unresolved.[150]

Similarly, even if the ''decisionmaking process is complete'' criterion from the Statement of Considerations were deemed appropriate to engraft onto the regulation, we conclude that the criterion is met under the second clause of the second sentence of the regulatory definition of ''circulated draft.'' That portion of the definition in 10 C.F.R. § 2.1001 states:

> A ''circulated draft'' meeting the above criterion includes a draft of a document that eventually becomes a final document, and a draft of a document that does not become a final document due to either a decision not to finalize the document or

---

[145] We are unpersuaded by DOE's attempt at oral argument to reconcile these two concepts. *See* Tr. at 514-18. As Judge Rosenthal indicated at oral argument and DOE counsel essentially agreed, reconciling the terms ''unresolved'' and ''complete'' in the manner suggested by DOE requires setting the entire notion of plain meaning on its head. *See id.* at 517-18.

[146] *See* July LAMP §§ 4.4.2.2, 4.4.4.3; September LAMP §§ 4.4.2.2, 4.4.3.3.

[147] *See* July LAMP §§ 4.4.2.2, 4.4.4.3; September LAMP §§ 4.4.2.2, 4.4.3.3.

[148] *See* DOE Response at 17.

[149] *See id.*

[150] Finally, we are concerned with the administrative practicalities of ruling that a nonconcurrence must be ''unresolved'' and the ''decisionmaking process complete'' before a draft can be a circulated draft. Depositions and interrogatories are not available during the prelicense application phase. *See* 10 C.F.R. § 2.1018(b). In this situation, it is hard enough for a challenging party to (a) know of the document's existence and (b) make an initial showing that the document must be produced. How is the challenger expected to discover, know, or establish to the Board the negative proposition — that the nonconcurrence is not resolved? How is the party to show that the decisionmaking process is complete?

the passage of a substantial period of time in which no action has been taken on the document.

The second and third clauses of the second sentence of the definition make clear that, should a draft document satisfy the five criteria in the definition of circulated draft, the draft document must be made available on the LSN if a decision is made not to finalize the draft document, or if a substantial period of time has passed with no further action on the draft document. In other words, these provisions delineate two situations in which the decisionmaking process on a draft document is deemed to be final or concluded.[151]

In the circumstances presented, we find that the DOE decisionmaking process with respect to the Draft LA should be deemed completed under the terms of the second above-quoted clause. As previously discussed, *see* Part I.C.4, DOE, in November 2004, abandoned its nearly-met goal of finalizing the Draft LA and filing the license application by the end of 2004. Also as earlier indicated, *see* Part I.C.4, DOE's decision was forced, at least in part if not primarily, because of the decision by the Court of Appeals in *NEI v. EPA,* striking the EPA post-closure radiation standard for an HLW repository — a standard that the Draft LA was intended to meet. As DOE's counsel stated, the State has asked for ''a draft LA that, in part, addresses a regulatory standard that has been, in part, vacated by the Court of Appeals.''[152] And, before the application can be filed, EPA must develop and issue a new post-closure radiation standard that the NRC must adopt. DOE then must ensure its application meets the new, as yet unissued, standard. In this situation, we think it can fairly be said that DOE's determination not to finish and issue the Draft LA was, in the words of the regulation, ''a decision not to finalize the document.'' Thus, with respect to the Draft LA, we deem DOE's decisionmaking process completed.[153]

---

[151] In this regard, the regulatory history states:

> The requirement [of submitting a document to the LSS] applies regardless of whether any final document ultimately emerges from the LSS participant's decision-making process. A determination not to issue a final document, or allowing a substantial period of time to elapse with no action being taken to issue a final document, shall be deemed to be the completion of the decision-making process.

54 Fed. Reg. at 14,934.

[152] Tr. at 488.

[153] Our ruling that there has been a decision not to finalize the Draft LA should be contrasted with the typical document drafting scenario in which editorial, or even minor substantive, changes are made to a draft that then becomes a so-called second or subsequent draft. In the typical drafting scenario, the first draft is then abandoned and it is possible to say that there is a decision not to finalize the initial draft. The regulatory language should not be read so hyper-literally.

7. Circulated Draft vs. Preliminary Draft

Finally, we address DOE's argument that ''[t]he State's interpretation would effectively write out of existence the exclusion for preliminary drafts in 10 C.F.R. § 2.1003(a) and transform the narrow definition of 'circulated draft' into a wide-ranging production obligation that would swamp the LSN.''[154] DOE asserts that ''essentially every draft would qualify as a 'circulated draft' if the State's argument were accepted.''[155] DOE's argument is neither factually nor legally correct. Our interpretation of the regulations and our decision today concerning the Draft LA establish practical and logical parameters around the definition of ''circulated draft,'' and will not open the floodgates to ''swamp the LSN.''

First, it is clear that the Draft LA was a very significant document that represented a major milestone in DOE's license application process. It was the first full version of the draft license application.[156] Indeed, at the time of its delivery to DOE, BSC was contractually entitled to a performance-based incentive fee of over $11 million.[157] Very high levels of DOE management, including the official designated to sign the license application, devoted enormous amounts of management time reviewing the Draft LA. It underwent and completed DOE's Technical Team Review, Joint Chapter Review, and Joint Management Review.[158] The Draft LA received, in the words of key senior DOE officials, a ''major management review'' and a ''comprehensive management review.''[159] It was prepared and reviewed on the basis of DOE's own schedule mandating that the final license application be filed in December 2004. It was only on November 22, 2004, for reasons beyond its control, that DOE pulled back from the brink of filing the license application in December. In short, this was no routine draft. Ruling that this unique and enormously significant draft is a ''circulated draft'' does not render every draft a ''circulated draft'' and, thus, will have no deleterious effect on the scheme underlying the LSN.[160]

Second, because DOE has stated that it intends to produce on the LSN all the preliminary drafts of all of the technical documents that underlie the Draft LA, it

---

[154] DOE Brief in Opposition at 14-15.

[155] *Id.* at 14.

[156] *See* 2/9/05 NWTRB Transcript at 16.

[157] *See* DOE-BSC Contract at B-6.

[158] *See supra* Part I.C.3.

[159] *See* DOE Response, Exh. P, Summary of the [NRC/DOE] Quarterly Management Meeting in Rockville, Maryland (Nov. 22, 2004), at 4, 8.

[160] *See, e.g.,* Minutes of the [Sixth] HLW Licensing Support System Advisory Committee Meeting: Apr. 18-19, 1988 (May 31, 1988), at 4-5, ADAMS Accession No. ML012050034 (where DOE stated ''that including all 'preliminary drafts' in the LSS, before they reach the stage of a 'concurrence draft,' would simply bog the system down'').

is somewhat surprising that DOE would object to producing the Draft LA. At oral argument on the State's motion, counsel for DOE stated:

> [W]e [DOE] made this decision, Judge Karlin, with respect to the underlying technical documents, like the reports and studies, and analyses and AMRs, that we could have gone through — I mean, all of these documents go through a lot of drafting iterations, as you might imagine. And we could have gone through and said this one is not a circulated draft, this one is not, this is not, this one is not. We also recognize though that was, in part, going to be a very time-consuming and expensive process, and we said well, we have these drafts in our record compilation system. We're not culling them out because they do or do not meet the definition of circulated draft, so *we are voluntarily producing many, many drafts of these technical underlying documents so people can see the development of the science. You don't need to see the draft license application. We're going to be producing all the details, warts and all, for the development of the science on the project.*[161]

While we applaud this plan, we have difficultly imagining why DOE would not also produce one of the single most significant drafts that it has generated to date. In contrast to the ''many, many drafts of these technical underlying documents'' that DOE will be producing, the Draft LA brings it all together in one coherent package that the potential parties can better use and understand.

Additionally, although our conclusion that the Draft LA meets the regulatory criteria (and even putatively applicable nonregulatory criteria) of a ''circulated draft'' stands on its own, we believe that the production of the Draft LA on the LSN should substantially and materially promote the purpose of the pre-license application phase — to allow potential parties to formulate better and more focused contentions and thereby expedite the process.[162] Recognizing that the final application will certainly be different, perhaps significantly different, than the Draft LA, with the enactment of a new EPA post-closure standard this draft will be invaluable in allowing potential parties (a) to assess whether they have lingering concerns about the proposed project and license, and (b) if so, to formulate intelligible contentions. For example, the Commission's regulations require that each contention:

> must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief.

---

[161] Tr. at 544-45 (emphasis added).

[162] *See* 69 Fed. Reg. at 32,843.

10 C.F.R. § 2.309(f)(vi). Yet, unless the time is extended, petitioners will have just 30 days (*shorter* than the normal 60 days) from the date the application is docketed within which to file each such contention. 10 C.F.R. § 2.309(b)(2). Our decision, based upon the preceding reasoning, including our ruling on the contours of a circulated draft, also promotes the best and most efficient management of the HLW license application adjudicatory process. Any other conclusion likely would cause major delays.

C. Privilege Analysis

On May 12, 2005, DOE requested that we ''establish a briefing schedule on the issue whether the LSN regulations require production of drafts of the license application. This is an important issue, and its resolution now will avoid inevitable future disputes.''[163] DOE specifically claimed that the document was subject to the litigation work product privilege.[164] Upon questioning at the May 18, 2005 case management conference, it asserted that this is a ''high profile document'' and that ''for orderly proceedings'' it is best to brief and to resolve the issues now.[165] The State agreed and the Staff had no objection.[166] Accordingly, we established a schedule for the presentation of this issue. Pursuant to that schedule, on May 23, 2005, DOE issued a letter denying the State's request for the Draft LA, on the grounds, *inter alia,* that the Draft LA was protected against disclosure by legal privileges: the litigation work product privilege and the deliberative process privilege.[167] The State addressed each of these issues in its motion to compel.[168] DOE filed its opposition but, despite its own earlier requests for briefing on the specific issue of the litigation work product privilege, failed to address whether the Draft LA was protected by this privilege. Instead, DOE now asserts that the applicability of the litigation work product privilege is ''irrelevant or at least premature.''[169] Additionally, DOE states that we need not reach the issue of the

---

[163] [DOE]'s Memorandum in Response to May 11, 2005 Memorandum and Order Regarding Second Case Management Conference (May 12, 2005) at 27.

[164] *Id.* DOE first asserted that drafts of the license application qualified for the litigation work product privilege in its April 25, 2005 Supplement Brief concerning the proposed case management order. *See* [DOE]'s Supplement Regarding the Proposed Case Management Order Regarding Privilege Designations and Challenges (Apr. 25, 2005) at 8 n.2.

[165] Tr. at 384.

[166] Tr. at 387-88.

[167] DOE Denial Letter at 2.

[168] State Motion To Compel at 16-21.

[169] DOE Brief in Opposition at 15.

deliberative process privilege because it is rendered moot by the resolution of the circulated draft issue.[170]

We view DOE's failure to address whether the Draft LA is covered by the litigation work product privilege as a waiver of the claim.[171] DOE raised this issue and moved for its resolution now. After focusing the resources of the Board and the potential parties on this important issue, DOE now labels the matter as premature. The issue as to the proper scope of the litigation work product privilege in this proceeding has been briefed[172] and we have heard oral argument on it twice.[173] Resolution of this issue in the context of the Draft LA presents no factual difficulties. In these circumstances, we find DOE's failure to defend its asserted privilege claim as a waiver of that claim.

Alternatively, because the matter is before us and the same issue is likely to arise with regard to many other documents, we also resolve DOE's asserted claim as a matter of good case management.[174] Accordingly, we address the merits of the privilege issues.

1. Deliberative Process Privilege

NRC regulations clearly waive the deliberative process privilege for all circulated drafts, stating: ''Notwithstanding any availability of the deliberative process privilege under paragraph (a) of this section, circulated drafts not otherwise privileged shall be provided for electronic access pursuant to § 2.1003(a).'' 10 C.F.R. § 2.1006(c). Both DOE and the State agree that, should we find the Draft LA to be a circulated draft, that finding trumps any claim of the deliberative

---

[170] *Id.*

[171] *See* 10 C.F.R. § 2.705(b)(4) (''When a party withholds information otherwise discoverable under these rules by claiming that it is . . . subject to protection as trial preparation material, the party shall make the claim expressly and shall describe the nature of the documents, communications, or things not produced or disclosed in a manner that, without revealing information itself privileged or protected, will enable other parties to assess the applicability of the privilege or protection'').

[172] DOE Brief in Opposition at 15-16.

[173] Tr. at 86-100 (May 4, 2005); Tr. at 447-48 (July 12, 2005).

[174] DOE also asserts that we should not address the litigation work product privilege because doing so would be rendering an ''advisory opinion.'' DOE Brief in Opposition at 15-16. Assuming it is correct on the ''circulated draft'' issue, DOE suggests that the applicability of any privilege is irrelevant because the Draft LA need not be made available on the LSN. *Id.* at 15. DOE's premise is flawed. First, we are not prohibited from issuing advisory opinions, where, as here, there is a genuine dispute, well presented. *Texas Utilities Generating Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), ALAB-714, 17 NRC 86, 94 (1983). Second, even if the Draft LA is a preliminary draft, this merely postpones the day of reckoning during derivative discovery, when the litigation work product privilege claim must be confronted again. *See* 10 C.F.R. § 2.1019(i)(2)(iv). Given that the facts necessary to resolve the litigation work product question currently before us are unlikely to change, we see no reason to delay ruling on the privilege status of the Draft LA.

process privilege.[175] Therefore, because we have so found, the deliberative process privilege is overridden by regulation and that privilege does not preclude the Draft LA from being made available on the LSN.

2. Litigation Work Product

There is no dispute that the litigation work product privilege applies in this proceeding and protects documents prepared in anticipation of the litigation or hearing. As codified in Subpart J, the litigation work product privilege states:

> A party . . . may obtain discovery of documentary material otherwise discoverable under paragraph (b)(1) of this section and *prepared in anticipation of, or for the hearing* by, or for another party's . . . representative (including its attorney, surety, indemnitor, insurer, or similar agent) only upon a showing that the party . . . seeking discovery has substantial need of the materials in the preparation of its case and that it is unable without undue hardship to obtain the substantial equivalent of the materials by other means.

10 C.F.R. § 2.1018(b)(2) (emphasis added).

The issue here is whether the Draft LA was ''prepared in anticipation of, or for the hearing.'' The State argues that the Draft LA was not prepared in anticipation of the hearing but was prepared for independent regulatory reasons.[176] On the other hand, DOE asserted at the case management conference that the Draft LA ''is being prepared for filing with the NRC as part of the adjudicatory process.''[177] Thus, the parties are in disagreement as to the purpose underlying the document's preparation.

Such a disagreement is not uncommon given that many documents are prepared for both litigation and nonlitigation purposes. Federal courts have generally adopted the same test for dealing with such ''dual purpose'' documents.[178] Under that test, which DOE concedes is the appropriate one,[179] a document is ''prepared in anticipation of litigation'' if, ''in light of the nature of the document and the factual situation in the particular case, the document can fairly be said to have

---

[175] DOE Brief in Opposition at 15; State Motion To Compel at 16.

[176] State Motion To Compel at 19.

[177] Tr. at 89.

[178] *See, e.g., In re Grand Jury Subpoena,* 357 F.3d 900, 908-09 (9th Cir. 2004); *Maine v. United States Department of Interior,* 298 F.3d 60, 68 (1st Cir. 2002); *National Union Fire Insurance Co. v. Murray Sheet Metal Co.,* 967 F.2d 980, 984 (4th Cir. 1992); *Senate of Puerto Rico v. United States Department of Justice,* 823 F.2d 574, 586 n.42 (D.C. Cir. 1987); *Binks Manufacturing Co. v. National Presto Industries, Inc.,* 709 F.2d 1109, 1119-20 (7th Cir. 1983). *But see United States v. Davis,* 636 F.2d 1028, 1040 (5th Cir. 1981) (adopting a ''primary purpose'' test).

[179] Tr. at 87-88.

been prepared or obtained *because of* the prospect of litigation.'' 8 Charles Alan Wright et al., *Federal Practice & Procedure* § 2024 (2d ed. 1994) (emphasis added). In expounding upon this formulation, the Court of Appeals for the Second Circuit explained that ''the 'because of' formulation . . . withholds protection from documents that are prepared in the ordinary course of business or that would have been created in essentially similar form irrespective of the litigation . . . [e]ven if such documents might also help in preparation for litigation . . . .'' *United States v. Adlman,* 134 F.3d 1194, 1202 (2d Cir. 1998).

In this case, the issue is whether the Draft LA was prepared because of the hearing or because of some regulatory requirement or nonlitigation purpose. In other words, if not for the hearing, would the Draft LA have been created in essentially the same form? In answering that question, we reject DOE's assertion that the Draft LA is ''prepared for filing with the NRC as part of the adjudicatory process.''[180] It is fundamental that a license application must be prepared because it is a prerequisite to receiving a license. *See* 10 C.F.R. § 2.101(f)(1). Admittedly, there is a mandatory hearing that will take place on DOE's application and the application will be of central importance during that adjudicatory phase. But the Draft LA ''would have been created in essentially similar form irrespective of the [adjudicatory hearing].'' *See Adlman,* 134 F.3d at 1202. Because, DOE must submit, and the NRC Staff must review and approve, an application before DOE receives a license, *see generally* 10 C.F.R. Part 63, we find that the Draft LA is not protected by the litigation work product privilege.[181]

III. CONCLUSION

As set forth in Parts II.A and II.B, we conclude that the DOE Draft LA is documentary material and is a circulated draft within the meaning of 10 C.F.R. § 2.1001. Further, as set forth in Part II.C.1, we find that, pursuant to 10 C.F.R. § 2.1006(c), the Draft LA is not protected by any deliberative process privilege. Finally, as set forth in Part II.C.2, we find that DOE has waived its claim that the Draft LA is protected from disclosure by the litigation work product privilege and, even if not waived, the litigation work product privilege does not protect the Draft LA from disclosure. Accordingly, we grant the State of Nevada's June 6, 2005 motion to compel production of DOE's July 2004 draft license application,

[180] Tr. at 89.

[181] The State also asserts that FOIA policies provide an additional reason why DOE must make available the entire Draft LA, or at the very least, all nonprivileged segregable portions of the document. State Motion To Compel at 21-25. Because it is DOE and then the United States district courts that are vested with jurisdiction over FOIA cases involving DOE documents, we have no jurisdiction to enforce DOE's FOIA regulations. *See* 5 U.S.C. § 552(a)(4)(B) (2000); 10 C.F.R. Part 1004.

which, as noted in Part II.B.2, necessarily includes the September 2004 interim iteration. DOE shall make the Draft LA available on the LSN no later than the time it makes its initial certification pursuant to 10 C.F.R. § 2.1009(b).

It is so ORDERED.

THE PRE-LICENSE APPLICATION
PRESIDING OFFICER BOARD

Thomas S. Moore, Chairman
ADMINISTRATIVE JUDGE

Alex S. Karlin
ADMINISTRATIVE JUDGE

Alan S. Rosenthal
ADMINISTRATIVE JUDGE

Rockville, Maryland
September 22, 2005

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nils J. Diaz, Chairman
Edward McGaffigan, Jr.
Jeffrey S. Merrifield
Gregory B. Jaczko
Peter B. Lyons

In the Matter of **Docket No. 70-3103-ML**

LOUISIANA ENERGY SERVICES, L.P.
(National Enrichment Facility) **October 19, 2005**

The Commission affirms in part and reverses in part an Atomic Safety and Licensing Board decision in this proceeding involving an application to construct, operate, and decommission a gas centrifuge uranium enrichment facility.

RULES OF PRACTICE: CONTENTIONS (TIMELINESS OF CLAIMS)

In NRC practice, contentions must be based on documents or other information available at the time the petition is filed, and petitioners must articulate at the outset the specific issues they wish to litigate. On issues arising under the National Environmental Policy Act (NEPA), petitioners shall file contentions based on the applicant's environmental report, but may amend those contentions or file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement . . . that differ significantly from the data or conclusions in the applicant's documents.

RULES OF PRACTICE: CONTENTIONS (TIMELINESS OF CLAIMS)

An intervenor may not freely change the focus of an admitted contention at will as litigation progresses, but is bound by the terms of the contention.

That is, intervenors cannot seek to cure deficiencies of earlier pleadings by later introducing wholly new issues that could have been raised previously. But our rules allow timely amendment of NEPA contentions if there is significant new information or different conclusions in the DEIS that could not have been challenged previously.

NEPA: ENVIRONMENTAL ANALYSIS

NEPA does not call for certainty or precision, but an estimate of anticipated (not unduly speculative) impacts.

MEMORANDUM AND ORDER

I. INTRODUCTION

Two Intervenors, the Nuclear Information Resource Service (NIRS) and Public Citizen (PC), seek Commission review of LBP-05-13, an Atomic Safety and Licensing Board decision on environmental contentions.[1] Both the NRC Staff and the license applicant, Louisiana Energy Services, L.P. (LES), oppose the petition for review. Today we decide that the Board erred in not admitting for hearing an amended contention on the environmental impacts of depleted uranium disposal. As we see the record, NIRS/PC timely challenged the ''impacts'' discussion in the LES Draft Environmental Impact Statement (DEIS). We remand NIRS/PC's amended contention to the Board for further consideration and appropriate action.

The Commission sees no need, however, for a stand-alone hearing on the remanded environmental ''impacts'' contention. The issues and allegations on near-surface disposal of depleted uranium that NIRS/PC raised in its ''impacts'' contention substantially overlap those now before the Board as part of NIRS/PC's contentions challenging LES's estimates of depleted uranium disposal costs. Those contentions will be considered in an upcoming Board hearing scheduled to begin on October 24, 2005. The Board's fact findings on the disposal cost contentions — which also challenge near-surface disposal — may well prove sufficient for the Board to address and resolve the waste ''impacts'' contention. But if necessary, the Board can request supplemental evidence from the parties, to fill in gaps in the record.

The Commission continues to consider six other alleged Board errors raised in the petition for review. But given that the waste impacts issue relates to issues the

[1] 61 NRC 356 (2005).

Board expects to consider at the hearing scheduled to begin on October 24, 2005, we thought it important to decide that issue now.

II. BACKGROUND

This proceeding stems from LES's license application to construct, operate, and decommission a gas centrifuge uranium enrichment facility near Eunice, New Mexico. Earlier this year, the Board conducted an evidentiary hearing on NIRS/PC's four admitted environmental contentions. The Board ruled against NIRS/PC on all four contentions. In their petition for review, NIRS/PC allege seven Board errors.

Our decision today considers only the first alleged error, a claim that the Board erred in ''refusing to allow NIRS/PC to show the environmental impacts of waste disposal.''[2] NIRS/PC argue that they timely questioned the adequacy of the DEIS's discussion of near-surface disposal impacts. NIRS/PC also argue that they timely challenged the DEIS's analysis of the radiological impacts of deep disposal of depleted uranium. LES and the NRC maintain that the Board properly rejected these claims as too late and as an inappropriate expansion of already-admitted contentions.

Some confusion appears to have resulted from the originally similar titles and initially unclear scope of two contentions admitted in this proceeding. In their intervention petition, NIRS/PC submitted one large two-part contention titled ''Waste Storage and Disposal.''[3] Its first part focused on the ''plausibility'' of LES's proposed private and public sector depleted uranium disposal options. The contention's second part alleged an inadequate environmental impacts analysis in LES's Environmental Report. The Board divided the separate claims into two contentions.[4] It admitted three ''plausible strategy'' bases under a contention titled ''Depleted Uranium Hexafluoride Storage and Disposal.'' The Board admitted one basis alleging inadequate Environmental Report analysis of the impacts of a waste deconversion facility under a separate contention titled ''Impacts of Waste Storage and Disposal.''[5]

---

[2] Petition on Behalf of NIRS/PC for Review of First Partial Initial Decision on Environmental Contentions (''Petition for Review'') (June 23, 2005) at 14.

[3] Petition To Intervene by NIRS/PC (Apr. 6, 2004) at 25-36.

[4] LBP-04-14, 60 NRC 40, 67-68 (2004).

[5] Later in the proceeding, LES proposed that the Board drop the word ''Disposal'' from the title of the ''Impacts'' contention because, as originally admitted, the basis accepted for the contention pertained only to the environmental impacts of waste deconversion (converting depleted uranium to the U_3O_8 form for disposal). The Board then renamed the contention ''Impacts of Waste Storage.'' *See* Memorandum and Order (Ruling on Late-Filed Contentions) (11/22/04) at 15.

In their petition for review, NIRS/PC refer to both the ''plausible strategy'' and the ''impacts'' contentions. They attempted at different points in the proceeding to amend both contentions to raise new challenges to proposed disposal methods for depleted uranium waste. The ''plausible strategy'' contention (NIRS/PC EC-3/TC-1), however, remains before the Board and is scheduled for hearing. An appeal of Board rulings in regard to that contention is unripe at this time.[6] Accordingly, today we consider only Board rulings pertinent to the environmental ''impacts'' contention (NIRS/PC EC-4). The Board's decision in LBP-05-13 was its final decision on environmental issues. Our decision does, however, touch on the ''plausible strategy'' contention insofar as it relates the ''impacts'' contention.

III. ANALYSIS

In NRC practice, ''contentions'' must be based on documents or other information available at the time the petition is filed, and petitioners must articulate at the outset the specific issues they wish to litigate.[7] On issues arising under the National Environmental Policy Act (NEPA), petitioners ''shall file contentions based on the applicant's environmental report,'' but ''may amend those contentions or file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement . . . that differ significantly from the data or conclusions'' in the applicant's documents.[8]

With these principles in mind, we turn to the question before us: whether NIRS/PC raised their concerns about the environmental impacts analyses of near-surface and geologic disposal of depleted uranium in a timely fashion.

NIRS/PC first challenged near-surface disposal of depleted uranium in their original petition to intervene. They alleged that LES did not have a ''plausible strategy'' for disposal of the depleted uranium that the LES facility would produce. The Board admitted three bases for the ''plausible strategy'' contention. Two challenged the plausibility of LES's proposals for private sector disposal of depleted uranium — i.e., LES's intent to have a private conversion facility convert depleted uranium to a U_3O_8 product form and its intent then to dispose of the U_3O_8 in an exhausted uranium mine. A third basis challenged the plausibility of LES's proposal to have the Department of Energy (DOE) dispose of the depleted uranium waste pursuant to section 3113 of the USEC Privatization Act. That Act

[6] *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-2, 51 NRC 77 (2000).

[7] *See* 10 C.F.R. § 2.309(f); *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 338 (1999).

[8] 10 C.F.R. § 2.309(f)(2).

obligates DOE to accept depleted uranium for disposal if the NRC has made a determination that depleted uranium is a low-level radioactive waste.[9]

In challenging the proposed DOE waste disposal option, NIRS/PC argued that the option would be ''plausible'' only if the NRC determines that depleted uranium is a low-level radioactive waste. They went on to argue that it would be inappropriate for the NRC to declare depleted uranium low-level waste because ''the classification of low-level waste can apply only to waste that would clearly be appropriate for shallow land disposal and 100 year institutional control,'' and that ''DU [depleted uranium] meets neither requirement.''[10] They argued that the DOE disposal option was not a ''plausible strategy'' because depleted uranium actually should be treated as Greater-Than-Class-C (GTCC) waste, and requires deep disposal.[11] They presented a number of arguments addressing the radiological properties of depleted uranium and addressing our Part 61 regulations governing near-surface disposal of low-level waste. The Board admitted the ''plausible strategy'' contention for hearing, but said that the contention raised a ''novel legal or policy question regarding the status of depleted uranium hexafluoride waste as low-level waste.''[12] The Board therefore referred its admissibility ruling to the Commission.

While our decision on the referred ''plausible strategy'' contention was still pending, the NRC Staff issued the DEIS.[13] NIRS/PC promptly moved to amend and supplement their admitted contentions based on the DEIS. They attempted to amend both their ''plausible strategy'' and their environmental ''impacts'' contentions.

To the ''impacts'' contention — then titled ''Impacts of Waste Storage and Disposal'' — NIRS/PC added a challenge to new conclusions and data in the DEIS. They alleged that the DEIS impacts analysis was ''incorrect'' or deficient because it merely ''assume[d]'' that LES's depleted uranium may be disposed of in near-surface disposal facilities.[14]

---

[9] *See* Petition To Intervene at 27-31; LBP-04-14, 60 NRC at 67.

[10] Petition To Intervene at 28.

[11] *Id.* at 28-29.

[12] LBP-04-14, 60 NRC at 67.

[13] NUREG-1790, ''Environmental Impact Statement for the Proposed National Enrichment Facility in Lea County, New Mexico,'' Draft Report for Comment (Sept. 2004) (LES DEIS).

[14] The broadly phrased paragraph NIRS/PC proposed adding to the existing contention on waste ''impacts'' went as follows:

> The DEIS contains an incorrect analysis of the environmental impacts of the disposal of depleted uranium hexafluoride waste. The DEIS assumes that depleted uranium may be disposed of as low-level waste, which is incorrect. The DEIS fails to recognize the Commission's stated position that depleted uranium is not appropriate for near-surface disposal. The DEIS fails to support or explain the modeling of disposal of depleted uranium.

(Continued)

NIRS/PC set forth their specific claims in three bases. First, they complained of the DEIS's conclusion that depleted uranium may be disposed of as a ''Class A'' low-level waste. In support, NIRS/PC argued that the Commission's adoption of the Part 61 waste classifications rules did not include an environmental analysis of disposal of depleted uranium in the large quantities involved, and therefore that further additional environmental analysis was necessary to assure that near-surface disposal was appropriate.[15] They also claimed that depleted uranium more appropriately should be disposed of in the same manner as wastes classified as GTCC waste.[16] Secondly, they argued that the DEIS failed to acknowledge or ''account for'' earlier statements by the NRC expressing concern or doubt about whether near-surface disposal of depleted uranium would meet the 10 C.F.R. Part 61 performance objectives for land disposal, and that instead the DEIS ''simply assumes that disposal may occur at a near-surface disposal site.''[17] Lastly, NIRS/PC challenged the DEIS's estimates of the radiological releases from postulated geologic disposal sites. They claimed that the DEIS did not specify the models used. They argued that the geologic dose estimates for LES's New Mexico facility were ''unlike any reported'' for LES's earlier (now abandoned) Claiborne (Louisiana) enrichment facility application, and therefore it was unclear whether the DEIS had used the same models used in the *Claiborne* proceeding.[18]

In ruling on NIRS/PC's motion, the Board noted that the claims appeared to rest on ''significant new information revealed in the staff DEIS,'' which was ''sufficient to provide the requisite good cause'' for late submissions.[19] But the Board declined to admit the new claims because it said that they related to the ''issue of classification of depleted uranium as a low-level waste,'' an issue then pending before the Commission.[20] While stating that it would not ''at this juncture'' admit the DEIS challenge, the Board stressed that NIRS/PC could make ''a renewed motion'' to amend the ''impacts'' contention ''should the Commission hold that the Board should hear the waste classification issue.''[21]

See Motion on Behalf of NIRS/PC To Amend and Supplement Contentions (Oct. 20, 2004) at 13. Of note, where NIRS/PC claim that the DEIS merely assumes that depleted uranium may be disposed of as ''low-level waste,'' it is clear from the arguments made in the contention that they equate ''low-level waste'' with ''near-surface'' disposal. *See id.* at 16.

[15] *Id.* at 15.

[16] *Id.*

[17] *Id.* at 15-16.

[18] *Id.* at 16.

[19] Memorandum and Order (Nov. 22, 2004) (unpublished) at 14. No one has challenged the Board's ''good cause'' ruling.

[20] *See* October 20, 2005 Motion at 15.

[21] *Id.*

Later, in CLI-05-5, we found that depleted uranium is properly considered a low-level waste.[22] Accordingly, we held that disposal by DOE represents a ''plausible strategy'' under the USEC Privatization Act.[23] But we left open the question whether disposal in a near-surface facility is appropriate. We stated that ''low-level radioactive waste can encompass *both* those wastes suitable for near-surface disposal and those that may require greater isolation.''[24] Even if NIRS/PC's allegations about the unsuitability of near-surface disposal proved correct, we said, ''they would not show that depleted uranium should be categorized as anything other than a low-level radioactive waste.''[25] Having resolved the low-level waste question, we saw no need to decide questions about the suitability of near-surface disposal or questions about the precise classification of the depleted uranium waste (Class A, B, etc.).

Our decision in CLI-05-5 noted that still pending before the Board for hearing were related waste disposal challenges raised in connection with contentions challenging LES's waste disposal cost estimates.[26] We indicated that resolving those challenges may require further environmental or safety analysis of waste disposal. (At the time, the NRC Staff had not yet issued the FEIS or the Safety Analysis Report for the proposed facility.) We did not, however, actually ''remand'' waste disposal issues, as NIRS/PC suggest in their petition for review.[27] We simply decided the question before us: the plausibility of the DOE disposal option.[28] Notably, however, while we found that option plausible and reversed the Board's decision admitting a challenge to it, our decision cannot be understood to suggest that arguments on the suitability of near-surface disposal could never

---

[22] 61 NRC 22 (2005).

[23] *Id.* at 36.

[24] *Id.* at 32 (emphasis added).

[25] *Id.* at 34.

[26] *Id.* at 35 & n.64.

[27] Petition for Review at 15.

[28] On review, NIRS/PC attempt to recast their earlier arguments as if they were not focused on challenging the ''plausibility'' of the DOE disposal option and on the question whether depleted uranium could be categorized as a low-level radioactive waste. *See* Reply on Behalf of NIRS/PC (July 11, 2005) at 3. They stress that their waste disposal arguments apply ''to private as well as DOE disposal'' of depleted uranium. *See* Petition for Review at 3. But the contention we considered in CLI-05-5 was, as framed by the arguments presented, a ''plausible strategy'' contention. It challenged LES's proposed ''private'' disposal strategy (a private waste conversion facility and an exhausted uranium mine) and the DOE disposal option. In CLI-05-5 we reversed the Board's decision to admit for hearing the DOE disposal issue — based on our finding that depleted uranium is low-level waste. While the Licensing Board appears to have given the particular basis challenging the DOE disposal option an over-broad title (*see* LBP-04-14, 60 NRC 40, 78 (2004)) the fact remains that the basis focused on the DOE disposal option and the related question whether depleted uranium properly can be categorized as a low-level radioactive waste — issues resolved in CLI-05-5.

again be resubmitted in support of a new timely issue in the proceeding. We simply did not address the suitability of particular waste disposal methods or sites.

Following our decision on the DOE option, NIRS/PC again moved to amend and supplement their contentions to challenge the DEIS analysis of near-surface disposal. They pointed to the Board's earlier statements that they would be allowed to file ''a renewed motion'' following our decision, and expressly cited the specific pages of their earlier motion challenging the DEIS waste impacts analysis.[29] NIRS/PC's new motion again sought to challenge the DEIS impacts analysis of near-surface disposal methods and estimated geologic repository doses. They broadly alleged that the ''analyses of disposal methods in the DEIS are unsupported and technically deficient,'' and that the proposed methods would not meet ''relevant '' Commission standards.[30] As in their previous motion, NIRS/PC submitted contention bases with their more detailed claims. But while their earlier motion set forth the bases on two pages, the new one presented some twenty pages of bases, spanning a host of issues, most of which went well beyond the issues raised in their earlier claims following the DEIS issuance.

Among these numerous new claims, however, were essentially the same claims that had been raised in the previous contention. For example, quoting a study on depleted uranium disposal as a ''Class A'' low-level radioactive waste, NIRS/PC reiterated their claim that the Part 61 rulemaking had not included an environmental analysis of disposing of such a large inventory of depleted uranium, and that such additional analysis was necessary to assure that near-surface disposal would be appropriate.[31] They again argued that the radiological characteristics of the depleted uranium made it most comparable to wastes classified under Part 61 as GTCC waste.[32] They again noted that in the *Claiborne* enrichment facility proceeding, the NRC environmental impacts analysis had concluded that near-surface disposal under the conditions assumed may not meet the NRC dose limits.[33]

They also renewed their earlier challenge to the DEIS's estimates of radiological doses expected from deep disposal of depleted uranium, again claiming that the methodology for the dose calculations had not been provided. Specifically, they noted that there was an ''unexplained discrepancy'' between the *NEF* geological dose estimates, and the earlier *Claiborne* estimates upon which they were based,

---

[29] Motion on Behalf of NIRS/PC for Admission of Late-Filed Contentions (Feb. 2, 2005) (Proprietary) at 2.

[30] *Id.* at 8.

[31] *See* February 2, 2005 Motion (Proprietary) at 16-17.

[32] *See id.* at 8, 9-12, 16.

[33] *See id.* at 17.

even taking into account the proportionally larger amount of depleted uranium the NEF facility is expected to generate.[34]

The Board rejected NIRS/PC's renewed contention amendment request on several grounds. First, the Board found the new claims untimely and lacking ''good cause'' for late-filing. Because the claims related to an alleged deficiency in the DEIS, the Board stated that they should have been raised in NIRS/PC's earlier filing following the issuance of the DEIS.[35] On review, NIRS/PC argue that the Board ''fail[ed] to note that NIRS/PC did seek to add such [waste disposal analysis claims], but the Board had excluded them.''[36]

We cannot agree with the Board on the timeliness point. As we noted above, portions of NIRS/PC's new motion had raised essentially the same ''near-surface disposal'' and geological dose discrepancy issues raised right after the DEIS issued. The Board rejected the earlier contention — subject, though, to NIRS/PC's right to file a ''renewed motion'' — because related issues were then pending before the Commission.[37] All of this would have been clearer had NIRS/PC not — inappropriately — used their renewed motion to also introduce an extensive array of untimely claims, many altogether unrelated to their challenge to the DEIS analysis of depleted uranium disposal impacts.[38] Nonetheless, there was an overlap between the impacts analysis claims raised in the two motions, and therefore we cannot conclude that the second motion's waste impacts claims were untimely in their entirety.

Moreover, the second motion expressly referenced (effectively reviving) the relevant pages of the earlier contention's claims on the DEIS impacts analysis — claims the Board explicitly had found timely when NIRS/PC originally advanced them.[39] Significantly, there would have been no question about the timeliness of the NIRS/PC challenge to the DEIS impacts analysis had the Board simply held the timely filed waste ''impacts'' contention in abeyance, pending our decision on the question of depleted uranium's status as a low-level radioactive waste.

---

[34] *See id.*

[35] Memorandum and Order (May 3, 2005) (unpublished) at 10.

[36] NIRS/PC Petition for Review at 14.

[37] Memorandum and Order (Nov. 22, 2004) (unpublished) at 15.

[38] Indeed, the majority of the bases they submitted ventured into completely different issues that could have been raised previously, including claims about federal drinking water regulations, transportation, depleted uranium's toxicity as a heavy metal, and alternative depleted uranium product forms that NIRS/PC sought to have analyzed. Moreover, many of the claims appear to be late attempts to challenge the radiological dose analysis provided in the LES Environmental Report. Arguments challenging the specific groundwater or intruder dose conclusions set forth in the LES Environmental Report, the methodology upon which the dose calculations were made, and the adequacy of generic ''wet'' site and ''dry'' site dose analyses should have been raised earlier. We agree with the Board insofar as it ruled that those aspects of NIRS/PC's contention were untimely.

[39] *See* February 2, 2005 Motion (Proprietary) at 2.

Our decision in CLI-05-5 would not have affected the admission for hearing of the NIRS/PC ''impacts'' contention, which challenged the DEIS's discussion of near-surface disposal of depleted uranium and alleged a ''discrepancy'' in the DEIS geological dose estimates. On review, NIRS/PC additionally argue that their contention essentially dealt with the ''performance of disposal sites in containing radioactivity,'' not '' 'the issue of classification of depleted uranium as low-level waste,' '' and therefore inappropriately was dismissed on account of the pending Commission decision on depleted uranium classification.[40]

In light of this unusually complicated procedural history and the factors outlined above, we find that NIRS/PC's second motion did reiterate and thus revive their previous (and timely) challenge to the DEIS analysis of depleted uranium disposal impacts. For clarity's sake, however, we direct the Board and parties to focus on the terms and bases of the contention submitted in the first motion rather than the overbroad claims in the renewed motion. The renewed motion may be considered only to the extent that it raises or elaborates upon essentially the same ''impacts'' analysis arguments made following the DEIS. All other claims from the renewed motion appear untimely.

In addition to its timeliness ruling, the Board also found NIRS/PC's ''impacts'' contention inadmissible because ''the issue of disposal of depleted uranium falls outside of the narrow scope'' of the contention NIRS/PC sought to modify (NIRS/PC EC-4).[41] In opposing NIRS/PC's petition for review, LES elaborates on the Board's position. As LES's argument goes, because NIRS/PC's ''impacts'' contention — *as originally admitted* — challenged only the analysis of the impacts of depleted uranium *deconversion* (e.g., converting depleted uranium to the U_3O_8 product form), the Board acted properly in rejecting any new claims about depleted uranium *disposal.*[42]

But LES apparently has confused two different scenarios. LES is quite right that an intervenor ''may not freely change the focus of an admitted contention at will as litigation progresses, but is bound by the terms of the contention.''[43] That is, intervenors cannot seek to cure deficiencies of earlier pleadings by later introducing wholly new issues that could have been raised previously.[44] That was not the case here. NIRS/PC raised their challenge of the DEIS waste ''impacts'' analysis promptly after the DEIS issued — the first available opportunity, in other words, and the Board found ''requisite good cause'' for the submission

---

[40] *See* Petition for Review at 4-5.

[41] Memorandum and Order (May 3, 2005) (unpublished) at 11.

[42] *See* Answer of LES to Petition for Review (July 5, 2005) at 11-12.

[43] *Id.* at 12 (internal quotes and citation omitted).

[44] *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 386 (2002).

because of apparent ''significant new information'' in the DEIS.[45] When the Board refused to admit the amended ''impacts'' contention, citing a pending Commission decision, NIRS/PC promptly renewed their contention once we issued our decision. Our rules expressly allow timely amendment of NEPA contentions if there is significant new information or different conclusions in the DEIS that could not have been challenged previously.[46] By definition, an *amended* contention can include additional issues outside of the scope of the contention as originally admitted.

Finally, the Board concluded, without elaboration, that the proposed contention amendment lacked adequate factual or expert opinion support. But the bases for the waste impacts claims were in fact based upon the analyses of NIRS/PC experts.[47] In our view, NIRS/PC provided enough support for their challenge to the DEIS analysis.[48]

In short, we find that the NIRS/PC contention on the ''impacts'' analysis should have been admitted. We therefore reverse the Board's admissibility ruling and remand the contention, on the DEIS waste impacts analysis, as proposed in NIRS/PC's October 20, 2004 contention challenging the DEIS and as renewed early this year in the wake of our decision in CLI-05-5.[49]

---

[45] *See* Memorandum and Order (Nov. 22, 2004) (unpublished) at 14.

[46] 10 C.F.R. § 2.309.

[47] *See* February 2, 2005 Motion at 8.

[48] NIRS/PC alleged facts (supported by expert analysis) about the radiological characteristics of depleted uranium, and alleged that the environmental impacts of depleted uranium disposal in large quantities had not been analyzed in the Part 61 rulemaking. They cited to earlier NRC statements indicating that disposal of large quantities of depleted uranium at near-surface facilities may not meet the requirements of 10 C.F.R. Part 61.

NIRS/PC's support for their challenge to the DEIS estimate of doses from a geological repository is more sparse. They question whether the DEIS used the same models used in the earlier *Claiborne* proceeding because, they say, it is not clear how the DEIS used the earlier *Claiborne* dose estimates to calculate new estimates. Given corrections made in the FEIS, this issue appears amenable to summary disposition. Significantly, the NRC Staff in the FEIS clarified that the same models used in the *Claiborne* proceeding were used, and apparently has corrected the DEIS dose discrepancy highlighted by NIRS/PC. *See* LES FEIS (NUREG-1790), Vol. 1 at 4-64. If NIRS/PC actually mean to challenge the dose estimates used in the *Claiborne* proceeding, such a challenge appears untimely, given that the LES Environmental Report said that it was relying on the *Claiborne* dose estimates. Similarly, if NIRS/PC seek to challenge the dose analysis because it is based upon two representative disposal sites, such a claim seemingly also could have been based upon the Environmental Report, which addressed the same two representative sites.

[49] *See* October 20, 2004 Motion at 13, 15-16; February 2, 2005 Motion (Proprietary) at 9-12, 16-17.

IV. PROCEEDINGS ON REMAND

The Licensing Board suggested that a reason for not admitting for hearing the NIRS/PC renewed waste impacts contention was that there already was ''at least one other NIRS/PC contention concerning the impacts of depleted uranium disposal'' pending for litigation.[50] Indeed, NIRS/PC has a pending contention titled ''Costs of Management and Disposal of Depleted UF_6,'' or NIRS/PC EC-6/TC-3. That contention raises the question whether the ''engineered trench'' near-surface disposal method is an acceptable disposal method for depleted uranium under 10 C.F.R. Part 61. NIRS/PC also have a contention on ''Decommissioning Costs'' (NIRS/PC EC-5/TC-2). It challenges aspects of LES's decommissioning funding plan, including estimates of the cost of depleted uranium disposal which are based on near-surface disposal.

The Commission does not believe that these pending contentions on cost estimates are sufficient reason to reject altogether a contention that goes to the adequacy of the environmental impacts analysis, a matter separate from cost estimates. But it is true that essentially all of the bases or claims that NIRS/PC alleged in support of its environmental ''impacts'' contention made following issuance of the DEIS are addressed in the prefiled testimony that NIRS/PC has submitted to the Board on the cost-related contentions. Those contentions also challenge the viability of the near-surface disposal option.

In challenging cost estimates that are based on near-surface disposal, NIRS/PC present arguments that essentially encompass the same issues they raise in support of their ''impacts'' analysis claims about near-surface disposal. These include, for example, arguments on the radiological characteristics of depleted uranium in large quantities, the Part 61 rulemaking history, the impacts analysis from the earlier *Claiborne* proceeding, and other studies of near-surface disposal of depleted uranium.[51]

Given this substantial overlap between NIRS/PC's claims in support of the ''impacts'' analysis contention and their claims on near-surface disposal in support of the cost-related contentions, we expect that the Board will be able to address and resolve the ''impacts'' contention in conjunction with its factfinding on the other contentions. If the Board finds that additional information is necessary to

[50] Memorandum and Order (May 3, 2005) (unpublished) at 10.

[51] *Compare* October 20, 2004 Motion at 15-16; February 2, 2005 Motion (Proprietary) at 9-12 *with* Revised Direct Testimony of Dr. Arjun Makhijani in support of NIRS/PC Contentions EC-3/TC-1, EC-5/TC-2, and EC-6/TC-3 Concerning LES's Disposal Strategy and Cost Estimate (October 11, 2005), at 9-15, 20-25.

resolve the ''impacts'' contention, it can provide the parties an opportunity to provide supplemental evidence.[52]

V. WASTE CLASSIFICATION TABLES (10 C.F.R. § 61.55)

NIRS/PC's disposal ''impacts'' contention challenged the DEIS's classification of depleted uranium as a Class A low-level radioactive waste. That classification was based upon 10 C.F.R. § 61.55(a)(6), which specifies that if radioactive waste does not contain any of the radionuclides listed in either of two listed waste classification tables, it is Class A waste.[53] Depleted uranium does not contain the radionuclides listed in the specified tables, and therefore under a plain reading of the regulation, depleted uranium is a Class A waste. NIRS/PC nonetheless challenge the application of section 61.55(a)(6) to depleted uranium from uranium enrichment facilities. Specifically, they argue that in establishing the waste classification scheme, the Part 61 rulemaking did not analyze the radiological impacts of disposing of the large quantities of depleted uranium generated by uranium enrichment facilities.

The Commission is aware that in creating the section 61.55 waste classification tables, the NRC considered depleted uranium, but apparently examined only specific kinds of depleted uranium waste streams — ''the types of uranium-bearing waste being typically disposed of by NRC licensees'' at the time.[54] The NRC concluded that those waste streams posed an insufficient hazard to warrant establishing a concentration limit for depleted uranium in the waste

---

[52] The record already contains additional information on estimated radiological doses at representative ''wet'' disposal sites, typical of the humid southeastern United States, and ''dry'' disposal sites, typical of the western United States. These estimates derive from a Department of Energy Programmatic Environmental Impact Statement on the long-term management of depleted uranium hexafluoride. LES's Environmental Report summarized and referenced the DOE analysis and conclusions. *See* LES Environmental Report (Dec. 2003) at 4.13-12 to 4.13-13; *see also* DOE ''Final Programmatic Environmental Impact Statement for Alternative Strategies for the Long-Term Management and Use of Depleted Uranium Hexafluoride, DOE-/EIS-0269 (April 1999), at 1-19, 1-69 to 1-70, 1-3 to 1-4. NIRS/PC's intervention petition did not challenge the radiological dose estimates referenced in the LES Environmental Report, and therefore the Board should consider whether they have waived the opportunity to challenge the adequacy of the dose estimates for ''wet'' and ''dry'' disposal sites.

[53] *See* LES DEIS, NUREG-1790 at 2-27 (citing 10 C.F.R. § 61.55(a)(6)).

[54] *See* FEIS (Part 61), NUREG-0945, Vol. 1 (Nov. 1982) at 5-38; DEIS (Part 61), Vol. 3 at D-7; *see also* SECY-91-019, ''Disposition of Depleted Uranium Tails from Enrichment Plants'' (Jan. 25, 1991), at 4 (''Review of the Environmental Impact Statement supporting 10 C.F.R. Part 61 shows that although the NRC considered the disposal of uranium and UF_6 conversion facility source terms in the analysis supporting Part 61, NRC did not consider disposal of large quantities of depleted uranium from an enrichment facility in the waste streams analyzed because there was no commercial source at that time'').

classification tables.[55] Perhaps the same conclusion would have been drawn had the Part 61 rulemaking explicitly analyzed the uranium enrichment waste stream. But as Part 61's FEIS indicates, no such analysis was done.[56] Therefore, the Commission directs the NRC Staff, outside of this adjudication, to consider whether the quantities of depleted uranium at issue in the waste stream from uranium enrichment facilities warrant amending section 61.55(a)(6) or the section 61.55(a) waste classification tables.

Here, section 61.55(a)(6) makes no exception for depleted uranium from enrichment facilities. Hence, NIRS/PC's effort to use this adjudicatory proceeding to modify the rule to include such an exception is misdirected. The NRC has long prohibited the use of adjudicatory proceedings to challenge the terms of regulations.[57] Despite section 61.55(a), we are permitting the NIRS/PC waste impacts contention to go forward because a formal waste classification finding is not necessary to resolve the disposal impacts contention, which at bottom goes to whether the impacts of near-surface disposal have been adequately estimated or assessed for NEPA purposes.

We close with a word of caution. An NRC ''impacts'' analysis does not require a full-scale site-specific review, an inquiry in the purview of the responsible licensing agency, such as an Agreement State. NEPA also does not call for certainty or precision, but an *estimate* of anticipated (not unduly speculative) impacts. An assessment of the estimated impacts at one or more representative or reference sites can be sufficient. In this type of analysis, the impacts for a range of potential facilities or locations having common site or design features can be bounded. The LES facility will generate large new quantities of depleted uranium for disposal, and therefore it is appropriate for the NRC in its impacts analysis to assess whether the impacts of disposing of the LES depleted uranium are expected to be small, moderate, or otherwise.

V. CONCLUSION

For the foregoing reasons, we *affirm in part* and *reverse in part* the Board decision rejecting NIRS/PC's amended contention on the environmental impacts of depleted uranium disposal, and *remand* the contention to the Board for further proceedings consistent with this decision. We would expect the Board to consider

---

[55] *See* Final Rule: ''Licensing Requirements for Land Disposal of Radioactive Waste,'' 47 Fed. Reg. 57,446, 57,456 (1982).

[56] *See* note 54, *supra.*

[57] *See, e.g., Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 218 (2003); *see also* 10 C.F.R. § 2.335. NIRS/PC have not sought a waiver of the rules, as section 2.335 permits.

this contention in connection with its upcoming hearing on ''cost'' issues. The Board should make full use of its broad powers under our rules[58] to resolve the remanded issue on a schedule consistent with the Commission's overall 30-month goal for completing this adjudication.[59]

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 19th day of October 2005.

[58] *See* 10 C.F.R. § 2.319(k).

[59] *See* CLI-04-3, 59 NRC 10, 16 (2004). Any Board ''impacts'' findings will be added to the NEPA record of decision. *See Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 53 (2001).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nils J. Diaz, Chairman
Edward McGaffigan, Jr.
Jeffrey S. Merrifield
Gregory B. Jaczko
Peter B. Lyons

In the Matter of **Docket No. 70-3103-ML**

LOUISIANA ENERGY SERVICES, L.P.
(National Enrichment Facility) **October 19, 2005**

The Commission declines review of an Atomic Safety and Licensing Board decision rejecting three late-filed contentions.

RULES OF PRACTICE: REFERRAL OF RULING TO COMMISSION

It is the Commission's customary practice to accept Board certifications or referrals. However, routine rulings on contention admissibility are usually not occasions to exercise our authority to step into ongoing Licensing Board proceedings and undertake interlocutory review, particularly when a hearing on related matters is about to take place. While we encourage licensing boards to certify or refer to us ''novel legal or policy'' matters, that does not mean that all complicated questions, whatever their nature, must be resolved by the Commission prior to final Board decisions.

MEMORANDUM AND ORDER

The Licensing Board has referred to the Commission a decision rejecting three late-filed contentions.[1] The Board's decision responded to a motion by Intervenors

[1] *See* Memorandum and Order (Ruling on Motion To Admit Late-Filed Amended and Supplemental Contentions) (Aug. 4, 2005) (unpublished).

Nuclear Information and Resource Service and Public Citizen (NIRS/PC) seeking admission of two late-filed amended contentions and one late-filed supplemental contention.[2] The Board rejected all three contentions on timeliness and other grounds, but referred its decision to the Commission. The Board said its rulings raised ''novel legal or policy issues.''[3] We decline the referral.

It is the Commission's customary practice to accept Board certifications or referrals,[4] and indeed our original hearing notice in this proceeding encouraged the Board to promptly certify all novel legal or policy issues that would benefit from early Commission consideration.[5] Similarly, the NRC's rules of practice permit interlocutory Commission review of referred Board rulings ''if the . . . referral raises significant and novel legal or policy issues, and resolution of the issues would materially advance the orderly disposition of the proceeding.''[6] Earlier in this proceeding we accepted the Board's referral of its rulings on five contentions.[7]

The problem here is that we cannot tell which specific aspects of the Board's twenty-eight-page decision it expects us to review. The Board's referral order does not expressly identify particular ''legal or policy issues'' warranting immediate appellate review. Instead, the Board has referred to us, wholesale, the entirety of ''its rulings rejecting [the three] contentions.''[8] Significantly, however, the Board rejected all three contentions largely on the ground of untimeliness. By their nature, the timeliness of late-filed contentions turns on fact-specific considerations, such as when new documents or information first became available and how promptly intervenors reacted. ''[R]outine ruling[s] on contention admissibility'' are usually not occasions to exercise our authority to step into ongoing Licensing Board proceedings and undertake interlocutory review,[9] particularly when, as

---

[2] NIRS/PC sought to amend their ''plausible strategy'' contention on depleted uranium disposal strategies as well as their ''decommissioning costs'' contention. They also submitted a new environmental contention alleging a deficient Final Environmental Impact Statement (FEIS) analysis of depleted uranium disposal.

[3] *See* Memorandum and Order (Aug. 4, 2005), slip op. at 13, 22; *see also id.* at 26.

[4] *See, e.g., Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-11, 59 NRC 203, 209 (2004).

[5] *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-3, 59 NRC 10, 15-16 (2004).

[6] 10 C.F.R. § 2.341(f)(1).

[7] CLI-04-25, 60 NRC 223 (2004).

[8] *See* Memorandum and Order (Aug. 4, 2005), slip op. at 27.

[9] *See Exelon Generation Co., LLC* (Early Site Permit for the Clinton ESP Site), CLI-04-31, 60 NRC 461, 466 (2004).

here, a Board hearing on related matters is about to take place.[10] Forcing parties to file appellate briefs on the eve of a Board hearing, and then devoting our own attention to largely factual questions, is not a fruitful use of litigant or Commission resources. While we encourage licensing boards to certify or refer to us ''novel legal or policy'' matters, that does not mean that all complicated questions, whatever their nature, must be resolved by the Commission prior to final Board decisions.

The Board did find timely one of NIRS/PC's claims, a challenge to the Department of Energy's estimate of the costs of depleted uranium disposal.[11] The Board noted that the estimate had only been made available June 6, 2005, just 30 days prior to NIRS/PC's July 5 submission of their late-filed contentions. The Board went on, however, to find challenges to the DOE cost estimate beyond the scope of this proceeding. It said that in estimating the disposal costs, DOE had acted pursuant to its statutory authority under section 3113 of the USEC Privatization Act,[12] and that therefore DOE cost calculations ''are outside the scope of this proceeding and lacking materiality in that the agency has no basis for assuming DOE has erred in computing its fees and no authority to direct or challenge DOE's fee estimates established pursuant to its statutory authority.''[13] Whether the USEC Privatization Act precludes a challenge to DOE cost estimates is the kind of broad legal question that ordinarily might warrant interlocutory appellate review. But given that the upcoming Board hearing on LES's ''plausible'' disposal strategy and on LES's financial assurance is scheduled to begin imminently, we do not believe that calling for briefs and deciding this question now will ''materially advance the . . . disposition of the proceeding.''[14] If warranted, we can review the USEC Privatization Act question on a focused petition for review following the Board's final decision on financial issues.

In short, we have decided not to undertake interlocutory appellate review of the Board's timeliness (and other) rulings on the late-filed contentions. Our

---

[10] The next round of Board hearings is expected to begin on October 24, 2005. The Board anticipates hearing evidence on ''plausible disposal strategy'' and decommissioning ''costs'' issues. These are the subjects of two of NIRS/PC's late-filed contentions. *See* note 2, *supra.*

[11] The only other claim that the Board found timely related to an amendment to the Envirocare license (Envirocare Amendment 22). *See id.,* slip op. at 12. This amendment placed a radioactivity limit on depleted uranium. However, as the Board found, on its face the amendment at issue applies only to a ''Custom Source-55 gallon drum containing Depleted Uranium shaving in a homogenous concrete mix,'' which the Staff indicates is a calibration source used by Envirocare. Thus, the radioactivity limit imposed by the amendment does not appear to apply to LES's depleted uranium, making NIRS/PC's amendment-based claim inappropriate for immediate consideration.

[12] 42 U.S.C. § 2297h-11.

[13] Memorandum and Order (Aug. 4, 2005), slip op. at 21-22.

[14] 10 C.F.R. § 2.341(f)(1).

refusal to accept the referral is not tantamount to approval or disapproval of the Board decision. NIRS/PC may seek Commission review of the Board's decision rejecting their late-filed contentions following a final Board decision on the remaining NIRS/PC contentions scheduled for hearing this fall.

CONCLUSION

For the reasons above, the Commission declines review of the Board's August 2 ruling rejecting NIRS/PC's motion to admit late-filed amended and supplemental contentions.

IT IS SO ORDERED

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 19th day of October 2005.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nils J. Diaz, Chairman
Edward McGaffigan, Jr.
Jeffrey S. Merrifield
Gregory B. Jaczko
Peter B. Lyons

In the Matter of **Docket No. 72-22-ISFSI**

PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage Installation) **October 19, 2005**

RULES OF PRACTICE: EFFECT OF UNREVIEWED BOARD DECISIONS

Unreviewed Board decisions do not create binding legal precedent. *See Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-5, 47 NRC 113 (1998).

RULES OF PRACTICE: VACATUR

The Commission customarily vacates the Board's decision when its appellate review is cut short by mootness. *See, e.g., Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-99-24, 50 NRC 219, 222 (1999); *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-5, 47 NRC 113 (1998).

SAFEGUARDS INFORMATION

Section 147 of the Atomic Energy Act gives NRC authority over protecting safeguards information from unauthorized disclosure. *See* 42 U.S.C. § 2167. The protection of safeguards information, where warranted, is absolute; there is no

balancing of the government's duty to protect safeguards information against the public interest in disclosure. *Id.* ''The Commission . . . shall prohibit the unauthorized disclosure of safeguards information . . . .''

MEMORANDUM AND ORDER

On September 28, 2005, the NRC Staff filed a motion for ''directed certification.''[1] The Staff's motion sought interlocutory Commission review of a Licensing Board order[2] establishing a process for reviewing safeguards redactions to a decision on aircraft crashes that the Board had issued earlier this year. The NRC Staff's motion also sought a stay (albeit 2 days late)[3] of the Redaction Order. We deny the NRC Staff's motion as moot, and, pursuant to our customary practice, vacate the Board's Redaction Order.

I. BACKGROUND

On February 24, 2005, the Board issued two versions of its decision resolving a contention that military aircraft flying over the proposed Private Fuel Storage facility posed an unacceptable risk. One version, made publicly available, summarized the reasons for the Board's findings.[4] The other version, the Board's ''official'' partial initial decision, gave a more detailed explanation, including certain figures involved in the Board's calculations. Because precise figures could be of possible use to malefactors intending to attack the facility, the Board designated its partial initial decision a ''safeguards'' order and did not make it public.

When the Board issued its partial initial decision, it indicated that it would investigate whether there were nonsafeguards portions of the decision that could be usefully made public and published in the *Nuclear Regulatory Commission Issuances.* In its recent Redaction Order, the Board instructed the NRC Staff to submit a proposed redacted version of the partial initial decision and to forward it

[1] In support of its motion — in effect, a petition for interlocutory review — the NRC Staff invoked two provisions in our former rules of practice (applicable to this case), 10 C.F.R. § 2.718(i) (2004) and 10 C.F.R. § 2.786(g) (2004).

[2] Order Regarding Redaction of Final Partial Initial Decision (Sept.15, 2005) (Redaction Order).

[3] The Staff itself characterized its stay request as late. *See* NRC Staff's Motion for Directed Certification at 2 n.4 (Sept. 28, 2005). In view of our decision today that the NRC Staff's motion is moot, we need not consider whether and when we will consider an out-of-time stay request.

[4] *See* ADAMS accession number ML050620391.

to the other litigating parties (Private Fuel Storage, L.L.C., and the State of Utah) for their ''comments.''

Two weeks later, the NRC Staff responded by filing the motion we have before us today. The Staff argued that the Board lacked jurisdiction to issue its Redaction Order because the Commission had already issued a final adjudicatory decision in the proceeding,[5] that the Board's redaction order improperly created an adversarial-type process to decide safeguards questions, and that the Board's order contemplated an improper ''balancing'' of the NRC's interest in protecting safeguards material against the public's interest in disclosure.

II. DISCUSSION

The NRC Staff's appellate challenge to the Board's Redaction Order is now moot. Although the Staff requested the Commission to stay the Board's order, the Staff almost immediately complied with it by redacting the Board's ''air crash'' partial initial decision and sending the redacted version to the other two parties.[6] A few days later, counsel for the State of Utah notified the Board by e-mail that neither the State nor PFS objected to the Staff's safeguards designations. The redacted version of the Board's partial initial decision therefore is now ready for publication. There is no outstanding controversy for the Commission to resolve on appeal. Hence, we deny as moot the NRC Staff's motion for directed certification and for a stay.

While unreviewed Board decisions do not create binding legal precedent, it is prudent to vacate such decisions when Commission appellate review is cut short by mootness. That is our customary course, and one we take again today.[7] It eliminates any confusion or future effects stemming from unreviewed Board decisions. We therefore vacate the Board's redaction order.

To provide guidance for the future, we remind our licensing boards that section 147 of the Atomic Energy Act gives NRC authority over protecting safeguards information from unauthorized disclosure.[8] The protection of safeguards information, where warranted, is absolute;[9] there is no balancing of the government's duty to protect safeguards information against the public interest in disclosure.

---

[5] CLI-05-19, 62 NRC 403 (2005).

[6] *See* Letter from Sherwin E. Turk, Counsel for NRC Staff, to Denise Chancellor (Sept. 29, 2005).

[7] *See, e.g., Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-99-24, 50 NRC 219, 222 (1999); *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-5, 47 NRC 113 (1998). *See generally Northern California Power Agency v. NRC,* 393 F.3d 223, 225-26 (D.C. Cir. 2004).

[8] *See* 42 U.S.C. § 2167.

[9] *Id.* ''The Commission . . . shall prohibit the unauthorized disclosure of safeguards information . . . .''

Moreover, the Redaction Order appears to contemplate an adversarial process for determining the security classification of information in the Board's opinion. If this is what the Board intended, it is improper. When necessary, the Board can seek Commission appointment of an adjudicatory employee to assist the Board in making safeguards redactions.[10]

III. CONCLUSION

For the foregoing reasons, the NRC Staff's motion for directed certification and for a stay is *denied* as moot, and the Licensing Board's September 15 Redaction Order is *vacated.*

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 19th day of October 2005.

[10] *See* 10 C.F.R. § 2.904 (2004).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nils J. Diaz, Chairman
Edward McGaffigan
Jeffrey S. Merrifield
Gregory B. Jaczko
Peter B. Lyons

In the Matter of **Docket No. 40-8838-MLA-2**

U.S. ARMY
(Jefferson Proving Ground Site) **October 26, 2005**

RULES OF PRACTICE: COMMISSION DISCRETION TO DIRECT PUBLIC PROCEEDINGS

The Commission may customize its rules of procedure for a particular case so long as there is adequate notice and no prejudice. *See National Whistleblower Center v. NRC,* 208 F.3d 256, 262 (D.C. Cir. 2000), *cert. denied,* 531 U.S. 1070 (2001); *City of West Chicago v. NRC,* 701 F.2d 632, 647 (7th Cir. 1983), citing *Bell Aerospace Co.,* 416 U.S. 267, 294 (1974).

MEMORANDUM AND ORDER

On September 12, 2005, the Presiding Officer referred to the Commission his order reinstating a conditionally dismissed prior proceeding concerning the U.S. Army's (''Army'') plan for decommissioning the Jefferson Proving Ground site in Indiana.[1] We accept the referral, affirm the decision to reinstate the

[1] LBP-05-25, 62 NRC 435 (2005).

earlier proceeding, and remand with instructions to use, for the remainder of this adjudication, our recently revised rules of procedure for adjudications.[2]

I. BACKGROUND

The Presiding Officer has described the history of the Jefferson Proving Ground site and related decommissioning proceedings in his various orders.[3] There is no point in reiterating that history at length. In short, the Army ceased testing depleted uranium munitions on the site in 1994, and since 1999, Save the Valley, Inc. (''Save the Valley'') has submitted three different hearing requests on various Army plans to decommission the site — one on the Army's initial decommissioning plan, another on a revised ''decommissioning/license termination plan,'' and still another on a ''possession-only license.''[4]

In 2003, the Army determined that testing required to decommission the site was too dangerous because of the presence of unexploded ordnance. It therefore decided to seek a possession-only license amendment that would leave an NRC license in force indefinitely, with institutional controls, but which would require no further cleanup. At that time, the Presiding Officer dismissed without prejudice the then-pending proceeding on a ''license termination plan'' to decommission the site.[5] He then granted Save the Valley's request to intervene in the possession-only license proceeding.[6]

In May of this year, the Army determined that it could in fact perform testing needed to characterize, and ultimately decommission, the site without undue danger to personnel. The Army therefore asked for a license amendment for an alternate schedule for submitting a new decommissioning plan, which it said it could complete within 5 years. The NRC Staff published a new *Federal Register* notice providing an opportunity for hearing on the Army's new license amendment request. Thereafter, on July 19, 2005, the Army withdrew its request for a possession-only license and moved to dismiss as moot the proceeding on the possession-only license.[7]

After an August 24, 2005 conference, the Presiding Officer issued a ruling, LBP-05-25, reinstating the prior adjudication on the Army's license termination plan. Pointing to our request earlier this year that the parties file status reports

---

[2] *See* Final Rule: ''Changes to Adjudicatory Process,'' 69 Fed. Reg. 2182 (Jan. 24, 2004).

[3] *See, e.g.,* LBP-05-9, 61 NRC 218 (2005).

[4] *See* Hearing Requests dated Feb. 2, 2000; Dec. 12, 2002; and Nov. 26, 2003. The Presiding Officer sets out this history in LBP-05-9, 61 NRC at 218-21.

[5] LBP-03-28, 58 NRC 437 (2003).

[6] LBP-04-1, 59 NRC 27 (2004).

[7] *See* Applicant's Motion for Dismissal of Proceeding, July 19, 2005.

with us, the Presiding Officer referred its latest ruling to us to provide ''an opportunity to determine whether [his] conclusion as to the appropriate course of action comports with [our] own.''[8]

II. DISCUSSION

Given the lengthy, changing nature of the Army's efforts at the Jefferson Proving Ground site, we understand and defer to the Presiding Officer's reasonable inclination to spare Save the Valley undue procedural burdens. Certainly, steps such as reestablishing standing would be a needless burden to a party that has already done so three times in the last 6 years. In addition, rather than restarting the proceeding from scratch, it makes sense to continue before a Presiding Officer who is familiar with the history of the site and proceedings. Further, as the Presiding Officer indicated, it is apparent that the Army's new decommissioning proceeding raises substantially the same issues as the license termination plan proceeding he dismissed without prejudice in 2003. If the 2003 proceeding could not be ''revived'' when the Army returns to its original plan to decommission the site, the term dismissal ''without prejudice'' would be meaningless.[9] In short, we see no reason to disturb the Presiding Officer's decision to revive the earlier license termination plan proceeding rather than force Save the Valley to file a fresh intervention petition.

But we do not agree with the Presiding Officer's decision that the resumed proceeding should go forward under the NRC's old rules of procedure, or with his implication that applying the NRC's revised procedural rules would impose an unnecessary burden on Save the Valley.[10] The revised hearing procedures should improve the effectiveness and efficiency of the NRC hearing process, and better focus and utilize the limited resources of all involved parties.[11] With respect to the application of the revised procedures, the final rule expressly provided that the revisions would apply to proceedings noticed on or after February 13, 2004, the effective date of the rule, *unless directed otherwise by the Commission.*[12] Indeed, we have applied the revised Part 2 rules to proceedings noticed prior to

---

[8] LBP-05-25, 62 NRC at 441, *citing* CLI-05-13, 61 NRC 356 (2005).

[9] Under the revised rules of procedure as well as the old, ''[w]ithdrawal of an application after the issuance of a notice of hearing shall be on such terms as the presiding officer may prescribe.'' *See* 10 C.F.R. § 2.107(a).

[10] *See* LBP-05-25, 62 NRC at 435 n.1, 439.

[11] 69 Fed. Reg. at 2190. The U.S. Court of Appeals for the First Circuit recently held that the revised rules comply with the Administrative Procedure Act, and that the NRC furnished an adequate explanation for the changes. *See Citizens Awareness Network, Inc. v. United States,* 391 F.3d 338 (1st Cir. 2004).

[12] *See* 69 Fed. Reg. at 2182.

the effective date, where circumstances have warranted.[13] Similarly, we conclude that this proceeding should continue under the revised rules.

It is well established that the Commission may customize its rules of procedure for a particular case so long as there is adequate notice and no prejudice.[14] Applying the revised procedures in this Subpart L proceeding will impose more stringent pleading requirements on Save the Valley with respect to issues raised in connection with the new license amendment request. No longer are general ''areas of concern'' sufficient to trigger a hearing in a Subpart L proceeding; an intervenor must articulate specific contentions with adequate bases.[15] But even under the prior rules, to effectively participate in this decommissioning proceeding, Save the Valley ultimately would be required to state its objections with sufficient particularity and factual support.[16] Indeed, the Presiding Officer indicated that he would ''call[ ] upon the Petitioner to determine whether it wishes to modify the statement of areas of concern previously filed.''[17] Because Save the Valley would ultimately be required to particularize its concerns under the former Part 2 provisions, we do not expect the use of the revised Part 2 rules to substantially alter the proceeding or in any way render an unfairness upon Save the Valley. The fact that Save the Valley is having to again defend its hearing request is through no fault of its own.

In addition, we believe the revised Part 2 rules offer benefits to all parties that improve upon the ''old'' rules of practice. For example, under the ''new'' Part 2, Subpart L, if a hearing is granted, it would be conducted as an oral hearing,[18] whereas under the ''old'' Part 2, a Subpart L proceeding consisted of written presentations, with an opportunity to request oral presentations only upon the presiding officer's determination that such presentations would be ''necessary to create an adequate record for decision.''[19] Moreover, if a hearing is granted, then all parties are subject to a ''tiered'' discovery process, including the mandatory disclosure provisions in 10 C.F.R. Part 2, Subpart C, and the hearing file requirement in Subpart L. These revised requirements are intended

---

[13] *See Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-3, 59 NRC 10, 12 n.1 (2004); *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), CLI-04-8, 59 NRC 113 (2004).

[14] *See National Whistleblower Center v. NRC,* 208 F.3d 256, 262 (D.C. Cir. 2000), *cert. denied,* 531 U.S. 1070 (2001); *City of West Chicago v. NRC,* 701 F.2d 632, 647 (7th Cir. 1983), citing *Bell Aerospace Co.,* 416 U.S. 267, 294 (1974).

[15] *See* 10 C.F.R. § 2.309(f).

[16] *See* 10 C.F.R. § 2.1233 (2004).

[17] *See* LBP-05-25, 62 NRC at 441.

[18] *See* 10 C.F.R. §§ 2.1206, 2.1207. If the parties unanimously agree, they may file a joint motion requesting a hearing consisting of written submissions.

[19] *See* 10 C.F.R. §§ 2.1233, 2.1235 (2004).

to significantly reduce the delays and resources expended by all parties in discovery.[20]

We do not, therefore, believe that imposition of the revised Part 2 rules prejudices Save the Valley, particularly in view of its longstanding interest in the site.[21] Moreover, we conclude that applying the revised rules would result in no unwarranted delay, added burden, or unfairness in this proceeding.

III. CONCLUSION

We therefore ORDER that:

1. The Presiding Officer's reinstatement of the earlier proceeding is *affirmed.*
2. Save the Valley's standing shall be considered already established.
3. The case shall continue under the jurisdiction of a Board composed of the two current judges and a third, to be designated by the Chief Judge of the Atomic Safety and Licensing Board Panel.[22]
4. Future proceedings shall be conducted under NRC's revised rules of procedure.
5. Save the Valley shall submit contentions within 30 days after issuance of this Order. Insofar as feasible it may supplement its previously filed ''areas of concern.'' (Any further extensions of time are within the discretion of the Board.)

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 26th day of October 2005.

---

[20] *See* 69 Fed. Reg. at 2194; 10 C.F.R. §§ 2.336, 2.1203.

[21] In its September 15, 2005 motion for further extension of time to file a request for hearing in response to the June 27, 2005 *Federal Register* notice, Save the Valley sought an extension of 14 days following this ruling. Because of the unusual procedural posture of this case, we further extend the time for Save the Valley to request a hearing to 30 days from the date of this Memorandum and Order. We would note that Save the Valley has indicated its awareness of the heightened contention admissibility standards, and the effort that preparation of new or revised contentions would entail. *See* ''Response in Opposition to Army's Motion To Dismiss and Request for Alternative Relief of Save the Valley, Inc.,'' dated July 29, 2005, at 4-5.

[22] The NRC's revised rules call for hearings before either a three-judge board or an administrative law judge. *See* 69 Fed. Reg. at 2191, 2194; 10 C.F.R. § 2.321(a).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nils J. Diaz, Chairman
Edward McGaffigan, Jr.
Jeffrey S. Merrifield
Gregory B. Jaczko
Peter B. Lyons

In the Matter of **Docket Nos. 50-336-LR**
50-423-LR

DOMINION NUCLEAR CONNECTICUT, INC.
(Millstone Nuclear Power Station,
Units 2 and 3) **October 26, 2005**

The Commission addresses a certified question, denies a requested exemption/waiver, reviews *sua sponte* the remainder of LBP-05-16, and offers guidance on a number of issues addressed in LBP-05-16.

RULES OF PRACTICE: EXEMPTIONS

For the Commission to grant an exemption or waiver of section 50.47(a)(1) and thereby permit the adjudication of emergency-planning issues in this proceeding, we must first conclude under our regulations and case law that (i) the rule's strict application would not serve the purposes for which it was adopted; (ii) the movant has alleged special circumstances that were not considered, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived; (iii) those circumstances are unique to the facility rather than common to a large class of facilities; and (iv) a waiver of the regulation is necessary to reach a significant safety problem. The use of ''and'' in this list of requirements is both intentional and significant. For a waiver request to be granted, *all four* factors must be met.

RULES OF PRACTICE: SCOPE OF PROCEEDING (LICENSE RENEWAL) LICENSE RENEWAL

Of course, *all* our Part 50 regulations are aimed, directly or indirectly, at protecting public health and safety. But that does not mean that they are all suitable subjects for litigation in a license renewal proceeding. They are not. In fact, the primary reason we excluded emergency-planning issues from license renewal proceedings was to limit the scope of those proceedings to age-related degradation unique to license renewal. Emergency planning is, by its very nature, neither germane to age-related degradation nor unique to the period covered by the Millstone license renewal application. Consequently, it makes no sense to spend the parties' and our own valuable resources litigating allegations of *current* deficiencies in a proceeding that is directed to *future*-oriented issues of aging. Indeed, at an earlier stage of this very proceeding, the Commission approved a Board decision excluding an emergency-planning contention.

RULES OF PRACTICE: SCOPE OF PROCEEDINGS (LICENSE RENEWAL) LICENSE RENEWAL

The Commission stressed in the Final Rule which added the final sentence to section 50.47 that the litigated issues in license renewal adjudications must be ''unique to the license renewal'' period. And, in this respect, we expressly addressed the issues of demography and transportation.

RULES OF PRACTICE: EXEMPTION (UNIQUE CIRCUMSTANCES)

A county's proximity to a nuclear power facility located in an adjoining state does not constitute ''unique circumstances'' for purposes of satisfying the third requirement for an exemption from the bar against challenging regulations in an adjudication.

PETITIONS FOR RULEMAKING (10 C.F.R. § 2.802)

PETITIONS FOR ENFORCEMENT (10 C.F.R. § 2.206)

A petitioner that fails to qualify for an exemption from the rule prohibiting challenges to our regulations is hardly bereft of appropriate means by which to bring its emergency-planning concerns to this Agency's attention. It may file a petition for rulemaking under 10 C.F.R. § 2.802 — the appropriate means for requesting Commission consideration of *generic* issues — or may file a petition under 10 C.F.R. § 2.206 for enforcement action.

RULES OF PRACTICE: LATE-FILED CONTENTIONS (GOOD CAUSE)

When considering late-filed contentions, we and the licensing boards give the ''good cause'' factor the most weight. To demonstrate good cause, a petitioner must show not only why it could not have filed within the time specified in the notice of opportunity for hearing, but also that it filed as soon as possible thereafter. If a petitioner cannot show good cause, then its demonstration on the other factors must be ''compelling.''

NOTICE (*FEDERAL REGISTER*)

RULES OF PRACTICE: NOTICE (*FEDERAL REGISTER*)

Federal Register publication of an NRC notice of hearing opportunity is legally adequate notice.

EMERGENCY PLANNING

LICENSE RENEWAL

RULES OF PRACTICE: SCOPE OF PROCEEDING (LICENSE RENEWAL)

Emergency-planning issues fall outside the scope of this license renewal proceeding.

PETITIONS FOR ENFORCEMENT (10 C.F.R. § 2.206)

The Board or its individual members in this proceeding have repeatedly expressed skepticism regarding section 2.206 petitions' likelihood of success. Indeed, one judge said at the prehearing conference that ''in the last thirty years or so, there have been no more than one or two [such petitions] granted'' (Tr. at 40-41). Such skepticism is entirely unwarranted and inappropriate in light of the Director Decisions (''DDs'') that rule upon section 2.206 petitions. Sixteen of this decade's twenty-six DDs granted at least some of the requested relief — either by a direct grant or by noting that Staff action prior to the DD's issuance had already provided the relief sought. Moreover, the Board's remarks contradict our ruling in this same proceeding just 9 months ago — that if CCAM, the previous unsuccessful petitioner to intervene, ''has information supporting its claim that Millstone's operation has caused 'human suffering on a vast scale,' its remedy would not be a narrowly focused license renewal hearing, but a citizen's petition under 10 C.F.R. § 2.206.'' CLI-04-36, 60 NRC 631, 638 (2004).

RULES OF PRACTICE: LATE-FILED CONTENTIONS (DELAY OR EXPANSION OF PROCEEDING)

The seventh late-filing factor (delay or expansion of proceeding) weighs against accepting a petition that would reopen a closed administrative adjudicatory record. But we disagree with the slight amount of weight the Board accords this factor — a conclusion that ignores our policy of expediting the handling of license renewal applications.

RULES OF PRACTICE: GOVERNMENT INTERVENORS; INTERVENORS (GOVERNMENTS); PLEADING RULES

Government entities seeking to litigate their own contentions are held to the same pleading rules as everyone else.

SETTLEMENTS

RULES OF PRACTICE: SETTLEMENTS

POLICY: SETTLEMENTS

We have no problem with boards encouraging settlement by parties to an adjudication. Indeed, we have a longstanding policy favoring settlements.

SETTLEMENTS

RULES OF PRACTICE: SETTLEMENTS

POLICY: SETTLEMENTS; PROMPT DECISIONMAKING

LICENSE RENEWAL

Apart from our policy of encouraging settlements, we have an equally important policy supporting prompt decisionmaking — a policy that carries added weight in *license renewal* proceedings such as this one. We have expressed this ''prompt decisionmaking'' policy repeatedly and explicitly in our case law. We have also expressed it less directly in 10 C.F.R. § 2.309(i).

SETTLEMENTS

The use of parallel tracks (simultaneous adjudication and negotiation) has the effect of spurring the parties to settlement.

SETTLEMENTS

Until a board has addressed the threshold issues of standing and admissibility of contentions, the proceeding is too inchoate to call for aggressive Board encouragement of settlement.

SETTLEMENTS

By pressing the Staff to negotiate, the Board assumed a supervisory role of directing the Staff to use its time and resources in negotiations with a nonparty over a potential nonissue. Boards lack the authority to supervise the NRC Staff in the performance of its regulatory duties.

SETTLEMENTS

In NRC practice, any party's participation in the settlement process is voluntary.

MEMORANDUM AND ORDER

On July 20, 2005, the Board issued a Memorandum and Order (LBP-05-16, 62 NRC 56) certifying to the Commission the question whether to grant Suffolk County New York's request for an exemption from (or waiver of) the final sentence of 10 C.F.R. § 50.47(a)(1) (providing that emergency-planning issues are not germane to license renewal determinations). The Board also concluded that Suffolk County's tardiness in submitting its petition to intervene was excusable under the late-filing standards of 10 C.F.R. § 2.309(c) and that the petition to intervene satisfied the contention requirements of 10 C.F.R. § 2.309(f).

On August 4, we issued CLI-05-18, agreeing to review the certified question, posing three additional questions to the parties, and setting a briefing schedule. 62 NRC 185. We have reviewed all briefs, including an *amicus curiae* brief from the Nuclear Energy Institute.[1] In today's Order, we address the certified question, deny the requested exemption/waiver, review *sua sponte* the remainder of LBP-05-16, and offer guidance on a number of issues addressed in LBP-05-16.

[1] We grant the Nuclear Energy Institute's August 18th motion for leave to file that brief.

I. BACKGROUND

On March 12, 2004, the NRC Staff published notice of Dominion Nuclear Connecticut's (''Dominion'') application for license renewal of the Millstone Nuclear Power Station, Units 2 and 3, and advised that interested persons who wished to intervene must file a petition by May 11, 2004.[2] On December 17, 2004 — more than 7 months past that deadline — Suffolk County filed its initial petition to intervene. The Secretary of the Commission rejected Suffolk County's petition on the ground that it had failed to address the Commission's late-filing standards.[3] Suffolk County filed a second petition to intervene on February 1, 2005, and sought a hearing on three contentions relating to emergency planning.[4] The NRC Staff and Dominion Nuclear Connecticut, Inc. (''Dominion'' or ''Licensee'') opposed the petition to intervene, arguing *inter alia* that it did not meet the standards governing late filing and that the contentions were outside the scope of a license renewal proceeding.[5]

On April 12, 2005, the Atomic Safety and Licensing Board held a prehearing conference to consider Suffolk County's late-filed petition to intervene. At that conference, the Board indicated that it would not be able to turn immediately to Suffolk County's petition. Although Suffolk County had not yet been admitted as a party, the Board suggested that all participants in this proceeding (the NRC Staff, Suffolk County, and Dominion) use the 3 weeks following the prehearing conference to attempt to establish the framework for a ''long-term working relationship'' that might result in termination of the ''short-term focused adjudication in favor of long-term non-adjudicatory solutions.''[6] The Board stated

---

[2] 69 Fed. Reg. 11,897 (Mar. 12, 2004).

[3] 10 C.F.R. § 2.309(c).

[4] The three contentions are:

(1) The evacuation plan for areas in Suffolk County within the ten (10) mile emergency zone is inadequate and fails to comply with federal regulations regarding such plans.

(2) The Town of Southold and the County have unique characteristics which should be considered in an evacuation/emergency plan pursuant to 10 C.F.R. 50.47.

(3) Offsite evacuation plans and other emergency plans maintained by the Millstone facility fail to protect the people of Suffolk County.

All three of these contentions concern emergency planning and were therefore submitted under the Atomic Energy Act, 42 U.S.C. §§ 2011 *et seq.* The county submitted no contentions under the National Environmental Policy Act, 42 U.S.C. §§ 4321 *et seq. See* NRC Staff's Response to Suffolk County Brief in Support of Petition for Late Intervention, dated Aug. 25, 2005, at 3-4.

[5] *See* NRC Staff Answer Opposing the Petition for Late Intervention of the County of Suffolk of the State of New York (Feb. 28, 2005); Dominion Nuclear Connecticut's Answer to the Petition for Late Intervention of the County of Suffolk (Feb. 28, 2005).

[6] Board Memorandum of Conference Call at 2 (Apr. 15, 2005).

that it would hold the proceeding in abeyance pending receipt of a report on the parties' progress.[7]

On May 6th, the NRC Staff informed the Board that the participants had been unable to meet due to scheduling difficulties, and requested that the Board lift its stay and rule on Suffolk County's intervention petition.[8] The Staff also assured the Board that, as part of its ongoing regulatory processes, it would continue to engage Suffolk County regarding its emergency-planning concerns, but was of the belief that communication on such issues should be divorced from the instant adjudication.[9] In a May 11th Memorandum, the Board again encouraged the parties to pursue settlement but did not indicate when it would issue a decision.[10]

The settlement meeting eventually took place on May 18th, with the participants concluding that they could not resolve the issues pending in this proceeding. Between May 20th and 26th, echoing the Staff's earlier request, all three litigants urged the Board to rule on Suffolk County's petition for review.[11] In apparent response to this unanimous request for action, the Board on June 3d issued a Status Memorandum explaining that the hearing in *Private Fuel Storage,* which had occupied the time of two of the Board's members, had now concluded and that the *Millstone* Board ''will now be turning its attention to deciding the merits of Suffolk County's pending intervention petition and the oppositions thereto.''[12] On July 20th — 7 weeks later — the Board issued LBP-05-16.

On July 28th, we accepted review of the certified question and requested briefs on three additional questions:

> (1) whether Suffolk County's late-filed contention was admissible under the criteria for considering late-filed pleadings and contentions set out in 10 C.F.R. § 2.309(c);
>
> (2) whether Suffolk County's contention regarding ''emergency planning'' satisfied the contention requirements in 10 C.F.R. § 2.309(f); and
>
> (3) whether, under the circumstances of this case, the Board properly postponed its contention-admissibility decision pending settlement talks.

---

[7] *Id.* The Board indicated that two of its members were devoting virtually all of their attention to issuing a final decision in the longstanding *Private Fuel Storage* adjudication.

[8] NRC Staff's Status Report (May 6, 2005).

[9] *Id.*

[10] Board Memorandum (May 11, 2005).

[11] NRC Staff's Second Status Report (May 20, 2005); Letter from David R. Lewis (attorney for Dominion) to the Board (May 23, 2005); Letter from Christine Malafi (attorney for Suffolk County) to the Board (May 26, 2005).

[12] Unpublished ''Status Memorandum,'' slip op. at 1-2 (June 3, 2005).

II. THE BOARD'S ORDER

The Board's decision is divided into three parts. The first part considers the late-filing issue, weighs the eight factors set out in 10 C.F.R. § 2.309(c), and concludes that on balance the Board should entertain the untimely petition.[13] The Board acknowledges that Suffolk County has shown no good cause for the tardiness of its petition for review (the first and most important[14] of the eight factors), which was submitted 9 months after the deadline for such filings. It finds, however, that six of the remaining seven factors support consideration of the petition, with the remaining factor carrying little weight in the opposite direction. The Board stressed in particular Suffolk County's status as a governmental entity seeking late intervention.[15]

The second part of the Board's decision addresses the adequacy of the petition for review itself.[16] Applying the standards in section 2.309(c), the Board observes that the County ''could have drafted its . . . intervention petition . . . in a manner that would have conformed more precisely to the outline of the governing regulation.''[17] But the Board then concludes that ''the substance sought after by that regulation was present,'' and ''[w]hen considered in light of the quality and contribution of the County's later pleadings . . . the petition's complaints, objectives, and underpinnings are clear.''[18] The Board bases this ruling on Suffolk County's ''serious commitment'' to the adjudicatory process, the ''specific focus'' of its contention, its ability to make ''a knowledgeable contribution on real issues,''[19] and its accountability to its constituents if the emergency plan were ever activated.[20]

The third part of LBP-05-16 considers Suffolk County's request for an exemption from (or a waiver of) the regulatory provision barring emergency-planning issues from consideration in license renewal proceedings.[21] The Board concludes that Suffolk County's exemption request, while ''not . . . overpowering . . . has sufficient content to certify it to the Commission.''[22] In support, the Board relies on the following confluence of circumstances surrounding Suffolk County's

---

[13] LBP-05-16, 62 NRC at 65-68.

[14] *See, e.g., Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-2, 51 NRC 77, 79 (2000).

[15] LBP-05-16, 62 NRC at 67-68.

[16] *Id.* at 69-70.

[17] *Id.* at 69.

[18] *Id.*

[19] *Id.* at 69-70.

[20] *Id.* at 69.

[21] *Id.* at 70-75.

[22] *Id.* at 71.

interest in the Millstone facility: the County's population growth, its geographical limitations, and Long Island's roadway system.[23] The Board also places considerable reliance on the fact that the county is not in the same state as the reactor and therefore lacks ''the usual political forces and administrative relationships that might help [it] draw attention to its concerns, outside the adjudicatory process.''[24]

Finally, the Board in the third part of the order also addresses, *sua sponte,* three issues unrelated to its decision to certify the exemption question — whether the Board exceeded its jurisdiction in suggesting settlement negotiations;[25] whether, in urging settlement discussions, the Board was attempting to direct the NRC Staff in the performance of its nonadjudicatory duties;[26] and whether the NRC Staff has, in this and other proceedings, made sufficient efforts to establish a collaborative relationship with local governments regarding health and safety issues.[27]

III. DISCUSSION

A. Certified Question Regarding Exemption

As stated above, the Board has certified to us the question whether to grant Suffolk County's request for an exemption from (or waiver of) the final sentence of 10 C.F.R. § 50.47(a)(1) (''No finding under this section ['Emergency plans'] is necessary for issuance of a renewed nuclear power reactor operating license''). We answer this question in the negative.

We agree with the Board that Suffolk County has a significant interest in the Millstone facility having a strong and workable emergency plan, and that the factors of population density, anticipated changes in population, geographical limitations, and roadway limitations are relevant to a plan's strength and workability. In fact, section 50.47(c)(2) of our regulations explicitly lists these same factors as relevant for consideration when determining the plume exposure pathway emergency-planning zone.[28]

But for us to grant an exemption or waiver of section 50.47(a)(1) and thereby permit the adjudication of emergency-planning issues in this proceeding, we must first conclude under our regulations and case law that (i) the rule's strict

---

[23] *Id.* at 72 n.15. *See also* Suffolk County's Brief in Support of Petition for Late Intervention, dated Aug. 17, 2005, at 1.

[24] LBP-05-16, 62 NRC at 72.

[25] *Id.* at 71 n.13, 73, 74.

[26] *Id.* at 72 n.14.

[27] *Id.* at 73-74.

[28] 10 C.F.R. § 50.47(c)(2).

application ''would not serve the purposes for which [it] was adopted'';[29] (ii) the movant has alleged ''special circumstances''[30] that were ''not considered, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived'';[31] (iii) those circumstances are ''unique''[32] to the facility rather than ''common to a large class of facilities'';[33] and (iv) a waiver of the regulation is necessary to reach a ''significant safety problem.''[34] The use of ''and'' in this list of requirements is both intentional and significant. For a waiver request to be granted, *all four* factors must be met.[35] As we explain below, Suffolk County fails to satisfy this burden.

Regarding the first of these factors, Suffolk County asserts that one of the purposes of section 50.47 was to ensure the protection of public health and safety, that Millstone's emergency plan does not provide such protection, and that the Commission should therefore waive the final sentence of section 50.47(a)(1) in order to address the flaws in Millstone's plan.[36] Of course, *all* our Part 50 regulations are aimed, directly or indirectly, at protecting public health and safety.[37] But that does not mean that they are all suitable subjects for litigation in a license renewal proceeding. They are not. In fact, the primary reason we excluded emergency-planning issues from license renewal proceedings was to limit the scope of those proceedings to ''age-related degradation unique to

---

[29] 10 C.F.R. § 2.335(b). *See also Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-20, 30 NRC 231, 235 (1989) (regarding the regulatory exemption of public utilities from the NRC's financial qualifications rule); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-88-10, 28 NRC 573, 597 (1988), *reconsid'n denied,* CLI-89-3, 29 NRC 234 & CLI-89-7, 29 NRC 395 (1989); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 239, *reconsid'n granted in part on other grounds,* LBP-98-10, 47 NRC 288, *aff'd,* CLI-98-13, 48 NRC 26 (1998).

[30] 10 C.F.R. § 2.335(b).

[31] *Seabrook,* CLI-89-20, 30 NRC at 235; *Seabrook,* CLI-88-10, 38 NRC at 597. *See also Private Fuel Storage,* LBP-98-7, 47 NRC at 238.

[32] *See Seabrook,* CLI-88-10, 28 NRC at 597; *Statement of Policy: Further Commission Guidance for Power Reactor Operating Licenses,* CLI-81-16, 14 NRC 14, 16 (1981) (Separate Views of Chairman Ahearne and Commissioner Hendrie) and authority cited; *Private Fuel Storage,* LBP-98-7, 47 NRC at 238, 240.

[33] *Seabrook,* CLI-88-10, 28 NRC at 597. *See also Seabrook,* CLI-89-20, 30 NRC at 235; *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), LBP-75-34, 1 NRC 626, 675 (1975), *aff'd,* ALAB-355, 4 NRC 397 (1976); *Private Fuel Storage,* LBP-98-7, 47 NRC at 238.

[34] *Seabrook,* CLI-88-10, 28 NRC at 597, 599; *Seabrook,* CLI-89-20, 30 NRC at 235.

[35] *See Seabrook,* CLI-88-10, 28 NRC at 596-97.

[36] Suffolk County's Reply Brief in Further Support of Petition for Late Intervention, in Response to Commission Memorandum and Order CLI-05-18, dated Aug. 25, 2005, at 4.

[37] *See generally Seabrook,* CLI-89-20, 30 NRC at 244 (''the vast majority of Commission rules have some basis in safety'').

license renewal.''[38] Emergency planning is, by its very nature, neither germane to age-related degradation nor unique to the period covered by the Millstone license renewal application. Consequently, it makes no sense to spend the parties' and our own valuable resources litigating allegations of *current* deficiencies in a proceeding that is directed to *future*-oriented issues of aging. Indeed, at an earlier stage of this very proceeding, the Commission approved a Board decision excluding an emergency-planning contention.[39] As explained at the end of this section of the Order, NRC regulations provide two other procedural mechanisms (10 C.F.R. §§ 2.206 and 2.802) by which Suffolk County may pursue its concerns about Millstone's current emergency plan.

Concerning the second waiver factor — lack of consideration of the issue in the rulemaking — we stressed in the Final Rule which added the final sentence to section 50.47 that the litigated issues must be ''unique to the license renewal'' period:

> [T]he final rule amends § 2.758 [now § 2.335] to make clear that challenges to the . . . rule could be made in the formal hearing so that certain other issues claimed to be necessary to ensure adequate protection *only during the renewal term* could be admitted in a formal hearing. . . . *Issues that have relevance during the term of operation under the existing operating license as well as license renewal would not be admissible* under the new provision of § 2.758 [now § 2.335] because there is *no unique relevance of the issue to the renewal term.*[40]

---

[38] Final Rule: ''Nuclear Power Plant Renewal,'' 56 Fed. Reg. 64,943, 64,961 (Dec. 13, 1991). *See also id.* (''The final rule is carefully structured to establish a regulatory process that is precisely directed at age-related degradation unique to license renewal''); Final Rule: ''Nuclear Power Plant License Renewal; Revisions,'' 60 Fed. Reg. 22,461, 22,464, 22,481 (May 8, 1995); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 9, 10 (2001) (because emergency-planning issues are already the focus of ongoing regulatory processes, they do not fall within the NRC's safety review at the license renewal stage). *Turkey Point* addressed the now-rescinded 10 C.F.R. § 2.758, which was redesignated in 2004 as section 2.335 without substantive change. *See* Final Rule: ''Changes to Adjudicatory Process,'' 69 Fed. Reg. 2182, 2224 (Jan. 14, 2004).

The scope of a license renewal proceeding may, of course, also include environmental issues but, as indicated in note 4, *supra,* Suffolk County has proffered none. As close as Suffolk County has come to doing so was its filing of a copy of a February 23, 2005 letter from the county commenting on the NRC Staff's Draft Environmental Impact Statement. *See* Suffolk County's Reply, dated March 10, 2005, at 13 and unnumbered attachment. *See also* Dominion Nuclear Connecticut's Reply to Suffolk County's Brief in Response to CLI-05-18, dated Aug. 25, 2005, at 9-10.

[39] *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 640 (2004).

[40] Final Rule: ''Nuclear Power Plant Renewal,'' 56 Fed. Reg. at 64,961-62 (emphases added).

And we expressly addressed the issues of demography and transportation — issues on which Suffolk County and the Board heavily rely:[41]

> Through its standards and required exercises, the Commission ensures that existing plans are adequate throughout the life of any plant *even in the face of changing demographics and other site-related factors*. . . . [T]hese drills, performance criteria, and independent evaluations provide a process to ensure continued adequacy of emergency preparedness in light of *changes in site characteristics that may occur during the term of the existing operating license,* such as *transportation systems and demographics.*[42]

As for the third waiver factor — uniqueness — we cannot accept Suffolk County's argument that its circumstances are ''unique'' to the Millstone facility rather than ''generic.''[43] Suffolk County's principal claim to uniqueness is grounded in the county's proximity to a nuclear power facility located in an adjoining state.[44] But Suffolk County is hardly unique in this respect. Suffolk County also claims to be unique due to changes in its demographics and roadway limitations.[45] Yet, as our above quotation from the Statement of Considerations to the ''Nuclear Power Plant Renewal'' Final Rule suggests, this is an important but common problem addressed by the NRC's ongoing regulatory program. Other jurisdictions are subject to demographic trends similar to those of Suffolk County.

Because Suffolk County's waiver request does not satisfy the first three required threshold standards for a waiver, we hold that Suffolk County's emergency-planning concerns do not qualify for a waiver or exemption under our rules. (Given this holding, we need not decide whether Suffolk County has met its burden regarding the fourth required conclusion — that a waiver of the regulation is necessary to reach a ''significant safety problem.'')

But this holding does *not* mean that Suffolk County is bereft of appropriate means by which to bring its emergency-planning concerns to this Agency's attention. It may, for instance, file a petition for rulemaking under 10 C.F.R. § 2.802[46] — the appropriate means for requesting Commission consideration of *generic* issues such as Suffolk County's challenge to section 50.47's exclusion of emergency-planning issues. (Indeed, one of Suffolk's nearby counties —

---

[41] *See* note 23, *supra.*

[42] Final Rule: ''Nuclear Power Plant Renewal,'' 56 Fed. Reg. at 64,966-67 (emphases added).

[43] *See, e.g.,* Suffolk County's Reply Brief in Further Support of Petition for Late Intervention, in Response to Commission Memorandum and Order CLI-05-18, dated Aug. 25, 2005, at 1-2.

[44] *Id.* at 1.

[45] *Id.*

[46] *See* 10 C.F.R. § 2.335(e). *See also Turkey Point,* CLI-01-17, 54 NRC at 12; Final Rule: ''Nuclear Power Plant License Renewal; Revisions,'' 60 Fed. Reg. at 22,481.

Westchester — has taken just that route to challenge this same exclusion.[47]) Suffolk County also has a second alternative means for seeking Commission consideration of its arguments regarding the Millstone emergency plan. Because Suffolk County criticizes the Millstone facility's emergency plan as inadequate,[48] Suffolk County may wish to file a petition under 10 C.F.R. § 2.206 for enforcement action against Dominion.[49] Finally, we observe that the NRC's ongoing oversight programs assure the adequacy of the Millstone emergency plan, removing any need to examine the plan in the context of an aging-focused license renewal proceeding.[50]

B. Late-Filing Issue

Section 2.309(c)(1) of the Commission's regulations sets forth the following factors to be considered and balanced when determining whether to consider a late-filed petition to intervene:

> (i) Good cause, if any, for the failure to file on time;
> (ii) The nature of the requestor's/petitioner's right under the [Atomic Energy] Act to be made a party to the proceeding;
> (iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding;
> (iv) The possible effect of any order that may be entered in the proceeding on the requestor's/petitioner's interest;
> (v) The availability of other means whereby the requestor's/petitioner's interest will be protected;
> (vi) The extent to which the requestor's/petitioner's interests will be represented by existing parties;

---

[47] *See* Petition for Rulemaking; Notice of Receipt, 70 Fed. Reg. 34,700, 34,701-02 (June 15, 2005) (seeking a revision of the Commission's license renewal regulations to require review of emergency evacuation, demographics, siting, population density, and transportation infrastructure).

[48] *See, e.g.,* Letter from Jennifer B. Kohn (attorney for Suffolk County) to the Board, dated May 26, 2005, at 3; Suffolk County's Reply, dated March 10, 2005, at 17 & attached Affidavit of Jennifer B. Kohn, dated March 10, 2005, at 2, ¶¶ 6, 7. *But see* Suffolk County's Reply Brief in Further Support of Petition for Late Intervention, in Response to Commission Memorandum and Order CLI-05-18, dated Aug. 25, 2005, at 9 (''since the County does not seek to modify, suspend, or revoke Dominion's license, a motion under 10 C.F.R. § 2.206 would be inappropriate'').

[49] *See* Final Rule: ''Nuclear Power Plant License Renewal; Revisions,'' 60 Fed. Reg. at 22,481.

[50] *See id.* at 22,463-64, 22,486; Final Rule: ''Nuclear Power Plant Renewal,'' 56 Fed. Reg. at 64,045. *Cf. Seabrook,* CLI-89-20, 30 NRC at 244 (''even were there to have been a showing in the matter before us that the rationale of the rule was undercut, the Commission sees no indication that [the licensee's] financial uncertainty will overcome the substantial protections that the Commission has in place by means of all its requirements to prevent the occurrence of a significant nuclear safety problem'').

(vii) The extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding; and

(viii) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record.[51]

The Board rejected Suffolk County's argument that the lack of actual notice (as opposed to constructive notice via the *Federal Register*) constituted good cause for missing the filing deadline by 9 months.[52] But despite the absence of good cause for lateness (factor 1), the Board still found the remaining late-filing factors sufficiently favorable to Suffolk County's position to overcome the tardiness of its petition. The Board relied heavily on our 1975 *West Valley* decision, where we granted Erie County's 9-month-late petition to intervene despite the absence of good cause.[53]

We disagree with the Board that the late-filing issue in this proceeding is controlled by *West Valley.* That case was an ongoing proceeding at the time Erie County sought late intervention,[54] while the instant case had already been terminated by the time Suffolk County sought intervention. Also, most of Erie County's issues were ''substantially identical'' to those previously admitted in the *West Valley* proceeding, and the evidentiary hearing was about a half-year in the future.[55] Thus, Erie County's admission into the *West Valley* proceeding would not have resulted in an expansion of the issues or a delay in the proceeding. By contrast, Suffolk County's contentions are new to the instant case and, as noted above, the proceeding was already closed at the time Suffolk County filed its February 1st petition to intervene.[56] And finally, Erie County's contentions, being nearly the same as those already admitted, were themselves admissible, whereas Suffolk County's contentions are not (for the reasons set forth *infra* in Part III.C of this Order).

As we have repeatedly ruled in considering late-filed contentions, we and the licensing boards give the ''good cause'' factor the most weight.[57] To demonstrate good cause, a petitioner must show not only why it could not have filed within the time specified in the notice of opportunity for hearing, but also that it filed

---

[51] 10 C.F.R. § 2.309(c)(1).

[52] LBP-05-16, 62 NRC at 65.

[53] *Nuclear Fuel Services, Inc.* (West Valley Reprocessing Plant), CLI-75-4, 1 NRC 273 (1975).

[54] *Id.* at 275-76.

[55] *Id.* at 276.

[56] In fact, even Suffolk County's *first* petition (filed Dec. 17, 2004, and rejected by the Commission's Office of the Secretary) was submitted *after* the date on which this proceeding was closed (December 8, 2004). *See* CLI-04-36, 60 NRC 631 (2004) (terminating proceeding).

[57] *See, e.g., Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-2, 51 NRC 77, 79 (2000); *State of New Jersey* (Department of Law and Public Safety's Requests Dated Oct. 8, 1993), CLI-93-25, 38 NRC 289, 296 (1993).

as soon as possible thereafter.[58] If a petitioner cannot show good cause, then its demonstration on the other factors must be ''compelling.''[59] We agree entirely with the Board's finding that Suffolk County's 9-month-late contention did not meet our good cause standard. The Board correctly viewed *Federal Register* publication of a notice of hearing opportunity as legally adequate notice.[60] But we do not agree with the remainder of the Board's ''late-filing'' ruling allowing Suffolk County to pursue its contentions. The Board either gave insufficient weight to the ''good cause'' factor or accorded too much to the remaining ''late-filing'' factors.

The Board was right that our second and third factors — which relate to a potential intervenor's standing — weigh in favor of considering Suffolk County's petition. We recognize Suffolk County's interest in ensuring a strong emergency plan at the Millstone facility. But, as we ruled both in today's decision[61] and in a prior decision in this docket,[62] emergency-planning issues fall outside the scope of this license renewal proceeding. Consequently, any Suffolk County briefs and evidence — and any Commission order — in this proceeding would not protect or affect Suffolk County's interest in emergency planning (fourth factor).

We disagree with the Board that Suffolk County has no other means by which to protect its interests regarding emergency planning (fifth factor). As explained at pages 562-63, *supra,* Suffolk County has two other avenues by which to pursue those interests. It could, under 10 C.F.R. § 2.802, submit a petition for rulemaking to amend 10 C.F.R. § 50.47, or it could file a petition under 10 C.F.R. § 2.206 requesting that the NRC Staff take enforcement or other action with regard to the Millstone facility's emergency plan.[63] We also observe that (while not required

---

[58] *New Jersey,* CLI-93-25, 38 NRC at 295.

[59] *Id.* at 296. *See also Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 73-75 (1992); *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-88-12, 28 NRC 605, 610, *reconsid'n denied,* CLI-89-6, 29 NRC 348 (1989), *aff'd sub nom. Citizens for Fair Utility Regulation v. NRC,* 898 F.2d 51 (5th Cir. 1990).

[60] ''Publication in the *Federal Register* is legally sufficient notice to all interested or affected persons regardless of actual knowledge or hardship resulting from ignorance, except those who are legally entitled to personal notice.'' *California v. Federal Energy Regulatory Commission,* 329 F.3d 700, 707 (9th Cir. 2003). *See also* 44 U.S.C. §§ 1507, 1508. The Commission's own regulations repeatedly provide for notice via the *Federal Register.* 10 C.F.R. §§ 2.104 (notice of hearing), 2.105 (notice of proposed action), 2.106 (notice of issuance of license or license amendment). *See also Private Fuel Storage,* LBP-98-7, 47 NRC at 173.

[61] *See* our discussion of the certified question, at pages 559-563, *supra.*

[62] *Millstone,* CLI-04-36, 60 NRC at 640.

[63] The Board or its individual members in this proceeding have repeatedly expressed skepticism regarding section 2.206 petitions' likelihood of success. *See* LBP-05-16, 62 NRC at 67; Tr. at 40-41, 49-50. Indeed, one judge said at the prehearing conference that ''in the last thirty years or so, there have been no more than one or two [such petitions] granted.'' Tr. at 40-41. Such skepticism is entirely

(Continued)

to do so) Suffolk County has submitted no comments on Westchester County's currently pending petition for rulemaking,[64] which raises issues similar to those that Suffolk County seeks to raise in this adjudication.

We agree with the Board that no other current parties could adequately represent those interests (sixth factor). There are no other parties because the instant adjudication was terminated on December 8, 2004.[65]

We agree with the Board that the seventh factor (delay or expansion of proceeding) weighs against Suffolk County.[66] The grant of the petition at this late stage of the adjudicatory proceeding would necessarily broaden the issues (there are now none) and delay the proceeding (originally closed last December). Indeed, the petition would require reopening a closed administrative adjudicatory record.[67] But we disagree with the slight amount of weight the Board accords this factor. The Board concludes that the weight should be ''minimal[ ]'' because the Staff's safety review will not be issued for several more months and the license renewal would itself not take effect for about a decade. This line of reasoning ignores our policy of expediting the handling of license renewal applica-

---

unwarranted and inappropriate in light of the Director Decisions (''DDs'') that rule upon section 2.206 petitions. Sixteen of this decade's twenty-six DDs granted at least some of the requested relief — either by a direct grant or by noting that Staff action prior to the DD's issuance had already provided the relief sought. *See* DD-00-3 (prior staff action resulted in the grant of all relief sought); DD-04-4, DD-03-2, DD-02-2, DD-01-5, DD-01-4, DD-01-2, DD-00-5, and DD-00-4 (eight decisions directly granting partial relief); DD-05-1, DD-04-3, DD-04-1, DD-02-7, DD-02-6, DD-02-4, and DD-02-3 (seven decisions granting partial relief *via* prior Staff action). *Compare* DD-04-2, DD-03-3, DD-03-1, DD-02-5, DD-02-1, DD-01-3, DD-01-1, DD-00-6, and DD-00-1 (ten decisions denying all requested relief). Moreover, the Board's remarks contradict our ruling in this same proceeding just 9 months ago — that if CCAM, the previous unsuccessful petitioner to intervene, ''has information supporting its claim that Millstone's operation has caused 'human suffering on a vast scale,' its remedy would not be a narrowly focused license renewal hearing, but a citizen's petition under 10 C.F.R. § 2.206.'' *Millstone,* CLI-04-36, 60 NRC at 638.

[64] *See* Petition for Rulemaking; Notice of Receipt, 70 Fed. Reg. at 34,701-02 (seeking a revision of the Commission's license renewal regulations to require review of emergency evacuation, demographics, siting, population density, and transportation infrastructure).

[65] *Millstone,* CLI-04-36, 60 NRC at 640.

[66] *See* LBP-05-16, 62 NRC at 68.

[67] See *Comanche Peak,* CLI-92-12, 36 NRC at 75 (citation and internal quotation marks omitted):

> [B]arring the most compelling countervailing considerations[,] an inexcusably tardy petition [to intervene] would (as it should) stand little chance of success if its grant would likely occasion an alteration in hearing schedules. . . .
>
> [I]n this case, there is no formal [adjudicatory] proceeding at all. Thus, granting the petition will result in the establishment of an entirely new formal [adjudicatory] proceeding, not just an alteration of an already established hearing schedule.

tions — which rests on the lengthy lead time necessary to plan available sources of electricity.[68]

And finally, we conclude that Suffolk County's participation would not assist in developing a sound record (the eighth factor). This factor would weigh in Suffolk County's favor only if its emergency-planning concerns fell within our license renewal inquiry. But as we reiterate in today's decision, license renewal is not a forum for considering emergency-planning issues.

Given our conclusions above regarding each of the factors, we disagree with the Board's ruling that the balance of late-filing factors weighs in favor of considering Suffolk County's petition to intervene.

C. Adequacy of the Petition To Intervene

For each admissible contention, a petition to intervene must, among other things:

> (iii) Demonstrate that the issue raised in the contention is *within the scope* of the proceeding;
>
> (iv) Demonstrate that the issue raised in the contention is *material* to the findings the NRC must make to support the action that is involved in the proceeding; [and]
>
> * * * *
>
> (vi) Provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a *material* issue of law or fact. This information must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief.[69]

The failure of a proposed contention to meet any one of these requirements is grounds for its dismissal.[70]

Suffolk County's contentions are fatally flawed. As explained above, emergency planning is not pertinent to a license renewal proceeding.[71] Suffolk County's three emergency-planning contentions therefore fail, on their face, to satisfy the above admissibility requirements. Moreover, as Dominion and the NRC Staff

---

[68] *See, e.g., Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-11, 58 NRC 130, 131 (2003), CLI-01-27, 54 NRC 385, 391 (2001), and CLI-01-20, 54 NRC 211, 214-16 (2001).

[69] 10 C.F.R. § 2.309(f)(1)(iii), (iv), (vi) (emphasis added).

[70] Final Rule: ''Changes to Adjudicatory Process,'' 69 Fed. Reg. at 2221; *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999).

[71] 10 C.F.R. § 50.47(a)(1).

argue,[72] it is not at all clear that Suffolk County's emergency-planning contentions — even were they material to license renewal — are sufficiently detailed or focused to permit a meaningful hearing. Contrary to the Board's view, government entities seeking to litigate their own contentions are held to the same pleading rules as everyone else.[73]

IV. GUIDANCE REGARDING BOARD'S ENCOURAGEMENT OF SETTLEMENT

We have no problem with boards encouraging settlement by parties to an adjudication. Indeed, we have a longstanding policy favoring settlements.[74] But the Board in this proceeding appears to have lost sight of two significant countervailing factors when it delayed an initial ruling on contention admissibility for a length of time to accommodate settlement discussions.

A. Policy of Prompt Decisionmaking

Apart from our policy of encouraging settlements, we have an equally important policy supporting prompt decisionmaking[75] — a policy that carries added weight in *license renewal* proceedings such as this one. We have expressed this ''prompt decisionmaking'' policy repeatedly and explicitly in our case law.[76] We have also expressed it less directly in 10 C.F.R. § 2.309(i). That rule *requires* a board to rule on any petition to intervene and/or request for hearing within 45 days of receiving the answers and replies associated with that petition and/or request. The last reply brief in this proceeding was filed on March 10th, triggering the 45-day period. The Board's order thus might have been expected by April 25th, more than twelve weeks prior to its actual issuance on July 20th.

We recognize that the Board was not silent during this period. The Board indicated that it hoped that the participants could reach a settlement — at least

---

[72] *See* Brief of Dominion Nuclear Connecticut in Response to CLI-05-18 Concerning Suffolk County's Late Petition and Waiver Request, dated Aug. 18, 2005, at 20-24.

[73] *See Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 224-25 (2004); *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 453-57 (2002), *petition for review denied,* CLI-03-12, 58 NRC 185 (2003).

[74] *See, e.g.,* Final Rule: ''Changes to Adjudicatory Process,'' 69 Fed. Reg. at 2209, and cited authority; 10 C.F.R. § 2.338; *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-97-13, 46 NRC 195 (1997).

[75] *See, e.g., Statement of Policy on Conduct of Adjudicatory Proceedings,* CLI-98-12, 48 NRC 18, *passim* (1998).

[76] *See* note 69, *supra.*

until the Board received the NRC Staff's Status Report on May 20th indicating that settlement talks had been unproductive.[77] We also recognize that, until May 24th, two of the *Millstone* Board's members were heavily involved in the *Private Fuel Storage* proceeding, and that the Board considered this factor to be at least a partial justification for suspending its decisionmaking process in this proceeding.[78] Even so, by May 20th, the Board presumably was aware that settlement talks had proved fruitless.[79] On June 3d, the Board said it would ''now turn[ ] its attention to deciding'' the issues surrounding the petition to intervene. Those issues are straightforward, all of them had been fully briefed and debated by April 12th, and the administrative record regarding them is quite short. But no decision issued for 2 months after the collapse of settlement talks. Under the circumstances, we see no reason why the Board could not have prepared its decision more quickly, and could not perhaps have made some progress on it simultaneously with the settlement talks.[80] The use of parallel tracks (simultaneous adjudication and negotiation) has the effect of spurring the parties to settlement.[81]

B. Premature Encouragement of Settlement

The second difficulty we have with the Board's encouragement of settlement is its timing. Until a board has addressed the threshold issues of standing and admissibility of contentions, the proceeding is too inchoate to call for aggressive Board encouragement of settlement. In this case, however, the Board, not the litigants themselves, was the moving force behind seeking settlement. The Board pressed the NRC Staff and the Licensee to expend time and resources negotiating with another litigant who had not yet been admitted as a party, about contentions that had not yet been found pertinent. For example, at one point, a member of the Board stated on the record that he believed ''[t]he NRC staff has an *obligation*

---

[77] NRC Staff's Second Status Report (May 20, 2005).

[78] *See* ''Memorandum of Conference Call'' at 1-2 (April 15, 2005); ''Status Memorandum'' at 1-2 (June 3, 2005), referring to *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-05-12, 61 NRC 319 (2005).

[79] Even assuming *arguendo* that the settlement talks and the two Board members' involvement in the *PFS* proceeding amounted to an appropriate *de facto* stay of the *Millstone* proceeding, section 2.309(i) would still have required the board to issue its order no later than July 8th.

[80] In fact, both the Licensee and the NRC suggested just this approach. *See, e.g.,* Letter from David R. Lewis (Dominion's counsel) to the Board at 2 (May 6, 2005); NRC Staff's Status Report at 2-3 (May 6, 2005).

[81] Indeed, section 2.338(f) of our regulations can be read to imply our preference for this approach: ''The conduct of settlement negotiations . . . does not automatically stay the proceeding. A hearing must not be unduly delayed because of the conduct of settlement negotiations.'' 10 C.F.R. § 2.338(f).

. . . to work with you [Suffolk County] and the licensee in these circumstances.''[82] Similarly, the Board's Chairman stated at the end of the conference:

> What my colleagues and I . . . would like you all to do is . . . to . . . see if you can't work out some memorandum of understanding that might say ['']here is how we're going to work on the issues today, the issues next week, and if the company gets its license renewal, on the issues over the next 40 years.[''][83]

Suffolk County certainly viewed the Board's ''encouragement'' as a form of pressure and welcomed it, stating that ''[w]hile Dominion and the NRC staff state that they are committed to meeting with the County, the County feels that the request by the Board gives the parties *added incentive* to ensure that the meeting takes place''[84] and that ''[r]uling on the County's motion [for summary disposition] at this time would *take away the parties' incentive* to continue these discussions.''[85] In our view, while no doubt acting in good faith to facilitate meetings among Suffolk County, the NRC Staff, and Dominion, the Board inappropriately stepped outside its own adjudicatory realm and into the NRC Staff's nonadjudicatory realm.[86] By pressing the Staff to negotiate, the Board assumed a supervisory role of directing the Staff to use its time and resources in negotiations with a nonparty over a potential nonissue. As we have stated repeatedly over the last quarter-century, boards lack the authority to supervise the NRC Staff in the performance of its regulatory duties.[87] We regret that we have to repeat this directive yet again. In our practice, ''any party's participation in the settlement process is voluntary.''[88]

---

[82] Transcript of April 12, 2005 Prehearing Conference (''Tr.'') at 60 (emphasis added).

[83] Tr. at 89.

[84] Letter from Jennifer B. Kohn (Suffolk County's counsel) to the Board at 2 (May 10, 2005) (emphases added).

[85] *Id.* at 3 (emphases added).

[86] *Compare Rockwell International Corp.* (Rocketdyne Division), ALAB-925, 30 NRC 709, 720 (1989) (stating that ''the Presiding Officer quite properly has encouraged settlement'' between the licensee and the *intervenors*), *aff'd,* CLI-90-5, 31 NRC 337 (1990).

[87] *See, e.g., Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-6, 59 NRC 62, 74 (2004) (''licensing boards do not sit to . . . supervise or direct NRC Staff regulatory reviews''), citing *Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 349 (1998); *Curators of the University of Missouri* (TRUMP-S Project), CLI-95-1, 41 NRC 71, 121 (1995) (''As a general matter, the Commission's licensing boards and presiding officers have no authority to direct the Staff in the performance of its safety reviews''); *Carolina Power and Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), CLI-80-12, 11 NRC 514, 516 (1980).

[88] *Rocketdyne,* CLI-90-5, 31 NRC at 340.

V. CONCLUSION

1. We *answer* the certified question in the negative and *deny* Suffolk County's request for an exemption from (or waiver of) 10 C.F.R. § 50.47(a)(1).
2. We *find* that the balance of late-filing factors weighs against considering Suffolk County's petition to intervene.
3. We *find* that Suffolk County's three emergency-planning contentions fall outside the scope of, and are immaterial to, this proceeding, and that those contentions are therefore inadmissible.
4. Based on the three preceding conclusions, we *terminate* this adjudicatory proceeding.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 26th day of October 2005.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nils J. Diaz, Chairman
Edward McGaffigan, Jr.
Jeffrey S. Merrifield
Gregory B. Jaczko
Peter B. Lyons

In the Matter of **Docket No. 50-289-LT-2**

AMERGEN ENERGY COMPANY, LLC
(Three Mile Island Nuclear Station,
Unit 1) **October 26, 2005**

The Commission denies the requests of Mr. Eric Joseph Epstein that the Commission publish a notice of opportunity for hearing, and also grant his petition to intervene and request for hearing, regarding any license transfers associated with the pending merger of Public Service Enterprise Group, Inc. into Exelon Corporation, insofar as that merger affects Unit 1 of the Three Mile Island Nuclear Station.

LICENSE TRANSFER NATURE OF A ''PROCEEDING''

PROCEEDINGS

Section 189a(1)(A) of the Atomic Energy Act requires the Commission to offer an opportunity for a hearing in certain kinds of ''proceedings'' such as those involving transfers of control over licensed facilities. But to bring into existence such a ''proceeding'' and its associated hearing rights, there must actually be a license transfer. Here, there is none. Because the Applicant did not propose to change either operating or possession authority, there is no direct license transfer. Similarly, because the ultimate parent (Exelon Corp.) already controls the Licensee (AmerGen) indirectly, and because the Exelon Corp. will survive the merger and therefore will continue to control AmerGen and (indirectly) the

license, there is no indirect license transfer. Hence, no ''proceeding'' exists for which the Commission can publish a notice of opportunity for hearing — or in which the petitioner can seek intervention and a hearing.

RULES OF PRACTICE: STANDING (INJURY); INTERVENTION (STANDING)

Under the traditional test for standing, Mr. Epstein must demonstrate (among other things) that the proposed transfer would injure his financial, property, or other interests.

RULES OF PRACTICE: STANDING (PROXIMITY STANDING''); INTERVENORS (STANDING)

''Proximity standing'' differs from ''traditional standing'' in that the petitioner claiming it need not make an express showing of harm. Rather, ''proximity standing'' rests on the presumption that an accident associated with the nuclear facility could adversely affect the health and safety of people working, living, or regularly engaging in activities offsite but within a certain distance of that facility. In ruling on claims of ''proximity standing,'' the Commission determines the radius beyond which it believes there is no longer an ''obvious potential for offsite consequences'' by ''taking into account the nature of the proposed action and the significance of the radioactive source.''

MEMORANDUM AND ORDER

Mr. Eric Joseph Epstein requests that we publish a notice of opportunity for hearing, and also grant his petition to intervene and request for hearing, regarding any license transfers associated with the pending merger of Public Service Enterprise Group, Inc. (PSEG), into Exelon Corporation (Exelon Corp.), the indirect parent of Licensee AmerGen Energy Company LLC (AmerGen), insofar as that merger affects Unit 1 of the Three Mile Island Nuclear Station (TMI-1). Generally, Mr. Epstein argues that the purported license transfers raise issues involving financial and technical qualifications as well as the possible extent of foreign ownership. We deny all of Mr. Epstein's requests.

Section 189a(1)(A) of the Atomic Energy Act requires the Commission to offer an opportunity for a hearing in certain kinds of ''proceedings'' such as those involving transfers of control over licensed facilities.[1] But to bring into existence

[1] 42 U.S.C. § 2239a(1)(A).

such a ''proceeding'' and its associated hearing rights, there must actually be a license transfer. Here, there is none. Because the Applicant did not propose to change either operating or possession authority, there is no direct license transfer. Similarly, because the ultimate parent (Exelon Corp.) already controls the Licensee (AmerGen) indirectly, and because the Exelon Corp. will survive the merger and therefore will continue to control AmerGen and (indirectly) the license, there is no indirect license transfer.[2] Hence, no ''proceeding'' exists for which we can publish a notice of opportunity for hearing — or in which Mr. Epstein can seek intervention and a hearing. Consequently, we reject Mr. Epstein's three requests. But even if we viewed the PSEG-Exelon merger as effectively requiring some sort of license transfer, Mr. Epstein would lack standing to intervene and challenge it.

To qualify for intervention, Mr. Epstein must (among other things) demonstrate standing.[3] Mr. Epstein presents two arguments in favor of his standing, both of which we reject. Under the traditional test for standing, Mr. Epstein must demonstrate (among other things) that the proposed transfer would injure his financial, property, or other interests. In apparent support of a ''traditional standing'' claim, Mr. Epstein points to his involvement — both personal and through organizations — in numerous activities related to Three Mile Island. In a separate order issued today in the *Peach Bottom* license transfer proceeding, we consider and reject this same claim to standing.[4] We incorporate that analysis by reference, and reject Mr. Epstein's arguments here on the same grounds as in *Peach Bottom* — in essence, such involvement does not support the necessary demonstration of injury.

Mr. Epstein's second argument in support of his standing is that he lives and operates a business 12 miles from the TMI nuclear facility. Although he does not say as much, we presume that Mr. Epstein is relying on a series of Commission decisions granting ''proximity standing'' to prospective litigants upon the mere showing that they lived within a certain radius of the regulated facility at issue.

''Proximity standing'' differs from ''traditional standing'' in that the petitioner claiming it need not make an express showing of harm. Rather, ''proximity standing'' rests on the presumption that an accident associated with the nuclear facility could adversely affect the health and safety of people working, living, or regularly engaging in activities offsite but within a certain distance of that

---

[2] *See* Letter from George F. Dick, NRC, to Christopher M. Crane, AmerGen Energy Company, LLC, dated July 6, 2005, ADAMS Accession No. ML051780114, concluding that no indirect license transfer approvals are required for (among others) TMI-1 in connection with the subject merger.

[3] 10 C.F.R. § 2.309(d), (f).

[4] *Exelon Generation Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-05-26, 62 NRC 577, 579-80 (2005).

facility.[5] In ruling on claims of ''proximity standing,'' we determine the radius beyond which we believe there is no longer an ''obvious potential for offsite consequences''[6] by ''taking into account the nature of the proposed action and the significance of the radioactive source.''[7]

In today's *Peach Bottom* order, we have examined the issue of ''proximity standing'' in license transfer cases,[8] and we believe our analysis in that decision is equally applicable here.[9] The proposed Commission action (i.e., the agency's purported approval of license transfers stemming from the merger) that triggered Mr. Epstein's instant petition poses no more radiological risk than the ones at issue in *Peach Bottom.* The merger will result in no changes to the physical plant itself, its operating procedures, design basis accident analysis, management, or personnel.

Moreover, the merger activity is occurring several levels above the current Licensee, AmerGen. Even after PSEG has merged into Exelon Corporation (ending the separate corporate existence of PSEG and leaving Exelon Corporation as the surviving company), AmerGen will continue to own and operate Unit 1 of Three Mile Island. It will remain a wholly owned subsidiary of Exelon Generation Company, LLC, which will in turn remain a wholly owned subsidiary of Exelon Ventures Company, LLC, which will itself remain a direct, wholly owned subsidiary of Exelon Corporation, which survives the subject merger. There will thus be no ''genealogical'' change for AmerGen.[10] Based on these

---

[5] *Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-522, 9 NRC 54, 56 (1979); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 146-47, *aff'd,* CLI-01-17, 54 NRC 3 (2001); *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation [''ISFSI'']), LBP-02-23, 56 NRC 413, 426-27 (2002), *petition for review denied,* CLI-03-12, 58 NRC 185 (2003).

[6] *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116 (1995); *Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329-30 (1989).

[7] *Georgia Tech,* CLI-95-12, 42 NRC at 116-17. *See also Diablo Canyon ISFSI,* LBP-02-23, 56 NRC at 427; *Turkey Point,* LBP-01-6, 53 NRC at 149; *Boston Edison Co.* (Pilgrim Nuclear Power Station), LBP-85-24, 22 NRC 97, 98-99 (1985), *aff'd on other grounds,* ALAB-816, 22 NRC 461 (1985).

[8] *Peach Bottom,* CLI-05-26, 62 NRC at 580-83.

[9] Also, for the reasons set forth in today's *Peach Bottom* order at 582 n.22, we decline to consider the ''proximity standing'' argument presented for the first time in Mr. Epstein's untimely submitted Supplemental Filing.

[10] After the merger, Exelon Corporation will change its name to Exelon Electric and Gas Corporation. However, the parent-subsidiary relationships between AmerGen and Exelon Corporation will remain unchanged upon completion of the merger. We note that the Application for Consent to Indirect License Transfers, dated March 3, 2005, appears to be somewhat imprecise in its description of the merger. Thus, we have taken the opportunity to avail ourselves of the Applicants' publicly available filings before the Securities and Exchange Commission for clarification. *See* Form U-1,

(Continued)

facts, we conclude that the purported ''license transfer'' raises no ''obvious potential for offsite consequences''[11] and that Mr. Epstein's presumed claim of ''proximity standing'' consequently lacks merit.

Our ruling today on Mr. Epstein's lack of ''proximity standing'' falls comfortably within the distance parameters of other rulings on ''proximity standing'' in license transfer proceedings. For instance, in the *Millstone* license transfer proceeding, we denied ''proximity standing'' to organizations claiming to have members living within 5-10 miles of the plant — even closer than Mr. Epstein's 12-mile proximity to TMI.[12] We also observe that the furthest distance for which this agency has ever granted ''proximity standing'' in a license transfer case was (with one distinguishable exception[13]) 6 1/2 miles.[14] Because Mr. Epstein offers no specific claim of harm beyond proximity, he lacks standing.

For these reasons, we deny Mr. Epstein's petition to intervene, request for hearing, and request for publication of notice.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 26th day of October 2005.

Application-Declaration Under the Public Utility Holding Company Act of 1935, filed by Exelon Corporation and PSEG (Mar. 15, 2005), which clarifies the legal steps of the planned merger of PSEG into Exelon Corporation.

[11] *Georgia Tech,* CLI-95-12, 42 NRC at 116; *St. Lucie,* CLI-89-21, 30 NRC at 329-30.

[12] *Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Units 1, 2, and 3), CLI-00-18, 52 NRC 129 (2000) (an indirect license transfer involving no change in the facility, its operation, licensees, personnel, or financing).

[13] *Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), LBP-93-5, 37 NRC 96 (1993), *aff'd,* CLI-93-16, 38 NRC 25 (1993), where we approved standing for a petitioner living 35 miles from the plant 1 week per month. The petitioner in *Vogtle* alleged that he could suffer harm from the transfer of operating authority to a company that, according to him, lacked the ''character, competence, and integrity to safely operate the Vogtle plant, and lacks the candor, truthfulness, and willingness to abide by the regulatory requirements necessary to operate a nuclear facility.'' CLI-93-16, 38 NRC at 33. The petitioner also alleged that management had submitted material false statements to the Commission in order to obstruct an NRC investigation. *Id.* Those unusual circumstances are not present here.

[14] *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 163-64 (2000) (involving a direct transfer of both the ownership and operation of the plant).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nils J. Diaz, Chairman
Edward McGaffigan, Jr.
Jeffrey S. Merrifield
Gregory B. Jaczko
Peter B. Lyons

In the Matter of **Docket Nos. 50-277-LT**
50-278-LT

EXELON GENERATION COMPANY, LLC
AND PSEG NUCLEAR, LLC
(Peach Bottom Atomic Power
Station, Units 2 and 3) **October 26, 2005**

The Commission finds that the petitioner to intervene lacks standing in this proceeding. The Commission therefore dismisses his petition and terminates this adjudication.

RULES OF PRACTICE: INTERVENORS (STANDING)

The Commission does not permit uninterested persons to intervene and play the role of ''private attorney general'' in NRC adjudications. Rather, the Commission insists that an intervenor have some direct interest in the outcome of the proceeding. To this end, the Commission has imposed upon all prospective intervenors (a.k.a. ''petitioners'' to intervene) the requirement to show they have ''standing'' to participate. To meet this requirement, a petitioner must demonstrate (among other things) that the proposed transfer would injure his financial, property, or other interests.

RULES OF PRACTICE: INTERVENORS (STANDING)

General interest in electric and nuclear issues or particular interest in a specific nuclear facility do not demonstrate injury. It is well established that mere intellectual or academic interest in a facility or proceeding is insufficient, in and of itself, to demonstrate standing.

RULES OF PRACTICE: INTERVENORS (''PROXIMITY STANDING'')

''Proximity standing'' rests on the presumption that an accident associated with the nuclear facility could adversely affect the health and safety of people working or living offsite but within a certain distance of that facility. In ruling on claims of ''proximity standing,'' the Commission decides the appropriate radius on a case-by-case basis. The Commission determines the radius beyond which it believes there is no longer an ''obvious potential for offsite consequences'' by ''taking into account the nature of the proposed action and the significance of the radioactive source.''

RULES OF PRACTICE: INTERVENORS (''PROXIMITY STANDING'')

In setting the proper radius for purposes of determining ''proximity standing,'' the initial question the Commission needs to address is whether the kind of action at issue, when considered in light of the radioactive sources at the plant, justifies a presumption that the licensing action ''could plausibly lead to the offsite release of radioactive fission products from . . . the . . . reactors.'' The burden falls on the petitioner to demonstrate this. If the petitioner fails to show that a particular licensing action raises an ''obvious potential for offsite consequences,'' then the Commission's standing inquiry reverts to a ''traditional standing'' analysis of whether the petitioner has made a specific showing of injury, causation, and redressability.

MEMORANDUM AND ORDER

This proceeding involves the proposed merger of the corporate parents of the two captioned companies and the consequent transfers of the 50% non-operating interests in Units 2 and 3 of the Peach Bottom facility from PSEG Nuclear, L.L.C. (PSEG Nuclear), to Exelon Generation Company, L.L.C. (Exelon Generation). To accomplish these goals, the companies need, and have here requested, a

license transfer authorization pursuant to 10 C.F.R. § 50.80. Mr. Eric Joseph Epstein opposes the authorization and has petitioned us both to intervene in this proceeding and for a hearing on the proposed license transfers. Generally, Mr. Epstein argues that the license transfers raise issues involving financial and technical qualifications as well as the possible extent of foreign ownership.

To qualify as an intervenor, Mr. Epstein must proffer at least one admissible contention and demonstrate standing.[1] Exelon Generation asserts that Mr. Epstein lacks standing.[2] For the reasons set forth below, we agree that Mr. Epstein lacks standing to intervene in this proceeding. We therefore dismiss his petition and terminate this adjudication.[3]

I. DISCUSSION

A. Traditional Standing

The Commission does not permit uninterested persons to intervene and play the role of ''private attorney general'' in NRC adjudications.[4] Rather, we insist that an intervenor have some direct interest in the outcome of the proceeding.[5] To this end, we have imposed upon all prospective intervenors (a.k.a. ''petitioners'' to intervene) the requirement to show they have ''standing'' to participate. To meet this requirement, a petitioner like Mr. Epstein must demonstrate (among other things) that the proposed transfer would injure his financial, property, or other interests.[6]

Mr. Epstein never squarely addresses this ''injury'' requirement. Rather, he merely points to his involvement — both personal and through organizations — in numerous activities related to Peach Bottom. Specifically, Mr. Epstein points to his leadership roles in two citizen groups that monitor Peach Bottom and other plants for safety and radiation levels, his participation in negotiations regarding mergers of companies with a financial interest in Peach Bottom, his participation in negotiations involving the decommissioning tariff for Peach Bottom and other nuclear facilities, his roles as publisher and researcher of documents addressing

---

[1] 10 C.F.R. § 2.309(d), (f).

[2] Answer of Exelon Generation Company, LLC to Request for Hearing of Eric Joseph Epstein, dated Sept. 15, 2005, at 4-8.

[3] Because our rulings on standing dispose of the case, we need not address the admissibility of Mr. Epstein's contentions.

[4] *See, e.g., Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), ALAB-333, 3 NRC 804, 806 n.6 (1976), *aff'd,* CLI-76-27, 4 NRC 610, 614 (1976).

[5] 10 C.F.R. § 2.309(d)(1)(iii).

[6] 10 C.F.R. § 2.309(d); *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996).

nuclear and electric issues, and finally his status as an intervenor before both this Commission and the Pennsylvania Public Utility Commission on nuclear and electric issues.[7]

Although these kinds of involvement demonstrate both Mr. Epstein's general interest in electric and nuclear issues and his particular interest in the Peach Bottom facility, they do not demonstrate injury. It is well established that mere intellectual or academic interest in a facility or proceeding is insufficient, in and of itself, to demonstrate standing.[8]

B. ''Proximity Standing''

The only other ground on which Mr. Epstein relies for his claim of standing is that his home and business are 40 miles from the Peach Bottom nuclear power plant. Although Mr. Epstein (who is a *pro se* litigant) cites no legal authority in support of his claim, he presumably is relying on a series of Commission decisions granting ''proximity standing'' to prospective litigants upon the mere showing that they lived within a certain radius of the regulated facility at issue. In such cases, a petitioner need not expressly ''establish the [traditional] standing elements of injury, causation or redressability.''[9] Rather, this particular kind of standing rests on the presumption that an accident associated with the nuclear facility could adversely affect the health and safety of people working or living offsite but within a certain distance of that facility.[10]

In ruling on claims of ''proximity standing,'' we decide the appropriate radius on a case-by-case basis. We determine the radius beyond which we believe there is no longer an ''obvious potential for offsite consequences''[11] by ''taking into

---

[7] *See* Mr. Epstein's Request for a Public Hearing, dated Aug. 21, 2005, at 12-13.

[8] *See, e.g., U.S. Department of Energy* (Plutonium Export License), CLI-04-17, 59 NRC 357, 363-64 (2004); *Sierra Club v. Morton,* 405 U.S. 727, 739 (1972) (''[A] mere interest in a problem, no matter how longstanding the interest and no matter how qualified the organization is in evaluating the problem, is not sufficient by itself to render the organization 'adversely affected' or 'aggrieved' within the meaning of the [Administrative Procedure Act]'').

[9] *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 150, *aff'd,* CLI-01-17, 54 NRC 3 (2001). *See also Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-522, 9 NRC 54, 56 (1979).

[10] *North Anna,* ALAB-522, 9 NRC at 56. *See also Turkey Point,* LBP-01-6, 53 NRC at 146-47; *Pacific Gas & Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation [''ISFSI'']), LBP-02-23, 56 NRC 413, 426-27 (2002), *petition for review denied,* CLI-03-12, 58 NRC 185 (2003).

[11] *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116 (1995); *Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329-30 (1989).

account the nature of the proposed action and the significance of the radioactive source.''[12]

The initial question we need to address is whether the kind of action at issue, when considered in light of the radioactive sources at the plant, justifies a presumption that the licensing action ''could plausibly lead to the offsite release of radioactive fission products from . . . the . . . reactors.''[13] The burden falls on the petitioner to demonstrate this. If the petitioner fails to show that a particular licensing action raises an ''obvious potential for offsite consequences,'' then our standing inquiry reverts to a ''traditional standing'' analysis of whether the petitioner has made a specific showing of injury, causation, and redressability.[14]

In this proceeding, we conclude that the risks associated with the transfer of the non-operating 50% ownership interest are *de minimis* and therefore justify no ''proximity standing'' at all. For purposes of ''proximity standing'' analysis, the instant case is quite similar to a license transfer proceeding 5 years ago involving the Millstone plant — where we denied ''proximity standing'' to organizations which claimed to have members living within 5-10 miles of the plant. At issue there was an indirect license transfer involving no change in the facility, its operation, licensees, personnel, or financing. We found that the nature of the Millstone license transfer raised no obvious potential for offsite consequences.[15] In the *Millstone* license transfer, the company operating the plant would continue to do so after completion of the merger.[16] The same is true here with the Peach Bottom merger — Exelon Generation will continue to operate the plant.[17]

We concluded in *Millstone* that it was ''far from obvious how [the] corporate restructuring would affect Petitioners' interests.''[18] And we likewise conclude here that Mr. Epstein has failed to show how the pending license transfers present an obvious potential for offsite consequences. The direct license transfer here is

---

[12] *Georgia Tech,* CLI-95-12, 42 NRC at 116-17. *See also Diablo Canyon ISFSI,* LBP-02-23, 56 NRC at 427; *Turkey Point,* LBP-01-6, 53 NRC at 149; *Boston Edison Co.* (Pilgrim Nuclear Power Station), LBP-85-24, 22 NRC 97, 98-99 (1985), *aff'd on other grounds,* ALAB-816, 22 NRC 461 (1985).

[13] *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), LBP-98-27, 48 NRC 271, 277 (1998), *aff'd,* CLI-99-4, 49 NRC 185 (1999), *petition for review denied, Dienethal v. NRC,* 203 F.3d 52 (D.C. Cir. 2000) (table).

[14] Mr. Epstein attempts no such specific showing in his petition to intervene. His ''standing'' discussion rests solely on his proximity to the plant and his knowledge about and interest in Peach Bottom.

[15] *Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Units 1, 2, and 3), CLI-00-18, 52 NRC 129 (2000).

[16] *Millstone,* CLI-00-18, 52 NRC at 131-32.

[17] Exelon's Answer at 2; Exelon's Application for Approval of License Transfers, dated March 3, 2005, at 2.

[18] *Millstone,* CLI-00-18, 52 NRC at 132-33.

similar to the Millstone indirect license transfer insofar as the Peach Bottom transfer will result in no changes to the physical plant itself, its operating procedures, design basis accident analysis, management, or personnel.[19] Moreover, Exelon Generation will remain both a wholly owned subsidiary of Exelon Ventures Company and an indirect wholly owned subsidiary of Exelon Corporation, which will survive the merger.[20] Based on these facts, we find that the proposed license transfers raise no ''obvious potential for offsite consequences''[21] and that Mr. Epstein's claim of ''proximity standing'' consequently lacks merit.[22]

Our denial of ''proximity standing'' to Mr. Epstein — who lives 40 miles from Peach Bottom — falls comfortably within the parameters of our general ''proximity standing'' case law. For instance, in a case involving a license amendment intended to reflect the Zion plants' shutdown and defueled condition, a potential intervenor sought standing based on the facts that his residence was within 8 $^1/_2$-9 miles of the plant, his children's schooling was within 12 miles, and his own and/or his wife's regular errands and business trips took them to within 1 mile of the plant.[23] The Board concluded (and we affirmed) that the license amendments at issue created no ''obvious potential for offsite consequences'' and that ''proximity standing'' should not be granted.[24] The Board therefore

---

[19] *See* Exelon's Answer at 2. By contrast, we have granted ''proximity standing'' to intervenors in proceedings addressing the transfer of both operating authority and ownership interests. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-02-16, 55 NRC 317 (2002); *Consolidated Edison Co. of New York* (Indian Point, Units 1 and 2), CLI-01-19, 54 NRC 109 (2001); *Power Authority of the State of New York* (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-00-22, 52 NRC 266 (2000); *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151 (2000); *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193 (2000).

[20] Application for Consent to Indirect License Transfers, dated March 3, 2005, at 2.

[21] *Georgia Tech,* CLI-95-12, 42 NRC at 116; *St. Lucie,* CLI-89-21, 30 NRC at 329-30.

[22] In a belatedly filed reply brief (styled ''Supplemental Filing'') addressing Exelon's Answers in both the *Peach Bottom* and *TMI* matters, Mr. Epstein claims precedential support from the NRC's grant of standing, in the TMI restart proceeding, to an intervenor living 50 miles from the plant. Supplemental Filing, dated Oct. 7, 2005, at 3-4. But under 10 C.F.R. § 2.309(h)(2), Mr. Epstein's reply brief was due no later than September 22d, 7 days after service of the Licensee's/Applicant's Answer. Mr. Epstein's references to section 2.309 in the cover letter to his reply brief demonstrate his awareness of this controlling regulation. Moreover, given that the authority Mr. Epstein belatedly cites is 25 years old, we see no good cause for the belated augmentation of his standing position. For all these reasons, we decline to consider the Supplemental Filing's augmentation of Mr. Epstein's ''proximity standing'' argument. But even were we to consider the merits of his latest argument, we would still reject it. Our two key rulings in this decision render the argument irrelevant: approval of these Peach Bottom license transfers presents no ''obvious potential for offsite consequences'' and therefore *any* ''proximity standing'' — regardless of the number of miles a litigant lives from the plant — is inapplicable to this license transfer proceeding.

[23] *Zion,* LBP-98-27, 48 NRC at 273-74, *aff'd,* CLI-99-4, 49 NRC at 191-93.

[24] *Id.,* LBP-98-27, 48 NRC at 276, *aff'd,* CLI-99-4, 49 NRC at 191.

required the potential intervenor to show that the ''amendments could plausibly lead to the offsite release of radioactive fission products from . . . the shutdown and de-fueled . . . reactors.''[25] Similarly in *St. Lucie,* we declined to approve ''proximity standing'' in a reactor license amendment case where the change at issue was a worker-protection requirement with no ''obvious potential for offsite consequences.''[26]

With the exception of one case quite different from ours,[27] even in license transfer cases where we have granted ''proximity standing,'' the petitioners lived within a *much* smaller radius of the plant than does Mr. Epstein — i.e., 6 to 6 1/2 miles,[28] 5 1/2 miles,[29] and 1 to 2 miles[30] from the plants at issue.[31] And of greater significance, each of those cases involved the transfer of both a *100% ownership interest* in the plant and the *operating authority* for the plant — a kind of transfer implicating more significant safety issues than are present here.

II. CONCLUSION

We reject Mr. Epstein's claim of standing and consequently dismiss this proceeding. Consistent with our prior practice, we direct the NRC Staff to

---

[25] *Id.,* LBP-98-27, 48 NRC at 277.

[26] *St. Lucie,* CLI-89-21, 30 NRC at 329-30.

[27] *Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), LBP-93-5, 37 NRC 96, 98, 106-07 (1993), *aff'd,* CLI-93-16, 38 NRC 25 (1993), where we approved standing for a petitioner living 35 miles from the plant 1 week per month. The petitioner in *Vogtle* alleged that he could suffer harm from the transfer of operating authority to a company that, according to him, lacked the ''character, competence, and integrity to safely operate the Vogtle plant, and lacks the candor, truthfulness, and willingness to abide by the regulatory requirements necessary to operate a nuclear facility.'' CLI-93-16, 38 NRC at 33. The petitioner also alleged that management had submitted material false statements to the Commission in order to obstruct an NRC investigation. *Id.* Those unusual circumstances are not present here. Yet even in *Vogtle,* the radius we approved was less than the 40 miles urged by Mr. Epstein.

[28] *Vermont Yankee,* CLI-00-20, 52 NRC at 163-64.

[29] *FitzPatrick & Indian Point,* CLI-00-22, 52 NRC at 293; *Indian Point,* CLI-01-19, 54 NRC at 133 (adopting CLI-00-22's ruling on ''proximity standing''). *See also Fitzpatrick,* CLI-00-22, 52 NRC at 295 (finding that a governmental entity seeking intervenor status had standing, given that its ''position [was] analogous to that of an individual living or working within a few miles of a plant whose license may be transferred''); *Diablo Canyon,* CLI-02-16, 55 NRC at 347 (same).

[30] *Oyster Creek,* CLI-00-6, 51 NRC at 193.

[31] *See generally Northern States Power Co.* (Monticello Nuclear Generating Plant; Prairie Island Nuclear Generating Plant, Units 1 and 2; Prairie Island Independent Spent Fuel Storage Installation), CLI-00-14, 52 NRC 37, 47 (2000) (granting standing to petitioners who ''live, work, or own property in the vicinity of the . . . plants'').

consider Mr. Epstein's contentions and Supplemental Filing as if they were ''written comments'' under 10 C.F.R. § 2.1305.[32]

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 26th day of October 2005.

[32] *See, e.g., Diablo Canyon,* CLI-02-16, 55 NRC at 348-49; *Duquesne Light Co.* (Beaver Valley Power Station, Units 1 and 2), CLI-99-23, 50 NRC 21, 22 (1999), and CLI-99-25, 50 NRC 224, 225 (1999).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Lawrence G. McDade, Chairman
Dr. Paul B. Abramson
Dr. Richard E. Wardwell

In the Matter of **Docket No. 70-7004**
(ASLBP No. 05-838-01-ML)

USEC INC.
(American Centrifuge Plant) **October 7, 2005**

In this proceeding regarding the application of USEC Inc. for authorization to possess and use source, byproduct, and special nuclear material to enrich uranium by the gas centrifuge process, the Licensing Board finds that neither Portsmouth/Piketon Residents for Environmental Safety and Security (PRESS) nor Geoffrey Sea has submitted an admissible contention, and therefore does not admit either party to the proceeding.

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

An admissible contention must (1) provide a specific statement of the legal or factual issue sought to be raised; (2) provide a brief explanation of the basis for the contention; (3) demonstrate that the issue raised is within the scope of the proceeding; (4) demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding; (5) provide a concise statement of the alleged facts or expert opinions, including references to specific sources and documents, that support the petitioner's position and upon which the petitioner intends to rely at hearing; and (6) provide sufficient information to show that a genuine dispute exists with regard to a material issue

of law or fact, including references to specific portions of the application that the petitioner disputes, or in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief. 10 C.F.R. § 2.309(f)(1)(i)-(vi). The purpose of the contention rule is to ''focus litigation on concrete issues and result in a clearer and more focused record for decision.'' 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004). The Commission has stated that it ''should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing.'' *Id.* The Commission has also emphasized that the rules on contention admissibility are ''strict by design.'' *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001), *petition for reconsideration denied,* CLI-02-1, 55 NRC 1 (2002). Failure to comply with any of these requirements is grounds for the dismissal of a contention. 69 Fed. Reg. at 2221.

RULES OF PRACTICE: CONTENTIONS (SCOPE)

A ''brief explanation of the basis for the contention'' is a necessary prerequisite of an admissible contention. 10 C.F.R. § 2.309(f)(1)(ii). ''[A] petitioner must provide some sort of minimal basis indicating the potential validity of the contention.'' 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989). The brief explanation helps define the scope of a contention — ''[t]he reach of a contention necessarily hinges upon its terms coupled with its stated bases.'' *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 (1988), *aff'd sub nom. Massachusetts v. NRC,* 924 F.2d 311 (D.C. Cir. 1991), *cert. denied,* 502 U.S. 899 (1991). *See also Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 (2002).

RULES OF PRACTICE: CONTENTIONS (SCOPE OF PROCEEDING)

A petitioner must demonstrate that the ''issue raised in the contention is within the scope of the proceeding,'' 10 C.F.R. § 2.309(f)(1)(iii), which is defined by the Commission in its initial hearing notice and order referring the proceeding to the Licensing Board. *See Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985). Any contention that falls outside the specified scope of the proceeding must be rejected. *See Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289-90 n.6 (1979).

RULES OF PRACTICE: CONTENTIONS (MATERIALITY)

A petitioner must demonstrate that the contention asserts an issue of law or fact that is material to the findings the NRC must make to support the action that is involved in the proceeding; that is, the petitioner must demonstrate that the subject matter of the contention would impact the grant or denial of a pending license application. 10 C.F.R. § 2.309(f)(1)(iv). ''Materiality'' requires that the petitioner show why the alleged error or omission is of possible consequence to the result of the proceeding. *Portland Cement Association v. Ruckelshaus,* 486 F.2d 375, 394 (D.C. Cir. 1973), *cert. denied sub nom. Portland Cement Corp. v. Administrator of EPA,* 417 U.S. 921 (1974). This means that there must be some significant link between the claimed deficiency and either the health and safety of the public or of the environment. *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 75 (1996), *rev'd in part on other grounds,* CLI-96-7, 43 NRC 235 (1996). *See also Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 439-41 (2002), *petition for review denied,* CLI-03-12, 58 NRC 185, 191 (2003).

RULES OF PRACTICE: CONTENTIONS (SUPPORTING INFORMATION OR EXPERT OPINION)

Contentions must be supported by ''a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue . . . together with references to the specific sources and documents on which [it] intends to rely to support its position. 10 C.F.R. § 2.309(f)(1)(v). It is the obligation of a petitioner to present the factual information and expert opinions necessary to adequately support its contention. *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 305, *vacated in part and remanded on other grounds,* CLI-95-10, 42 NRC 1, *and aff'd in part,* CLI-95-12, 42 NRC 111 (1995). Failure to do so requires that the contention be rejected. *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991). Under the standards for contention admissibility, ''[m]ere 'notice pleading' is insufficient.'' *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003) (citing *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 208 (2000)). A contention will be inadmissible ''if the petitioner 'has offered no tangible information, no experts, no substantive affidavits,' but instead only 'bare assertions and speculation.' '' *Id.* (quoting *Oyster Creek,* CLI-00-6, 51 NRC at 208). Further, if a petitioner neglects to provide the requisite support for its contentions, the Board should not make assumptions of fact that favor the petitioner, or supply information that is lacking.

Georgia Tech, LBP-95-6, 41 NRC at 305. *See also Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 422 (2001). Likewise, providing any material or document as a basis for a contention, without setting forth an explanation of its significance, is inadequate to support the admission of the contention. *See Fansteel,* CLI-03-13, 58 NRC at 205. At the contention admissibility stage, a petitioner must provide ''some alleged fact or facts in support of its position.'' 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989). This ''does not call upon the intervenor to make its case at this stage of the proceeding, but rather to indicate what facts or expert opinions, be it one fact or opinion or many, of which it is aware at that point in time which provide the basis for its contention.'' *Id.* In short, the information, facts, and expert opinions provided by the petitioner will be examined by the Board to confirm that they do indeed indicate the existence of adequate support for the contention. *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part on other grounds and remanded,* CLI-90-4, 31 NRC 333 (1990).

RULES OF PRACTICE: CONTENTIONS (CHALLENGE TO LICENSE APPLICATION)

All contentions must ''show that a genuine dispute exists'' with regard to the license application in question, challenge and identify either specific portions of, or alleged omissions from, the application, and provide the supporting reasons for each dispute. 10 C.F.R. § 2.309(f)(1)(vi). Any contention that fails directly to controvert the application, or that mistakenly asserts that the application does not address a relevant issue, may be dismissed. *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 247-48 (1993), *petition for review declined,* CLI-94-2, 39 NRC 91 (1994). *See also Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992).

RULES OF PRACTICE: CONTENTIONS (CHALLENGES TO STATUTORY REQUIREMENTS/REGULATORY PROCESS/COMMISSION RULE)

With limited exceptions, ''no rule or regulation of the Commission . . . is subject to attack . . . in any [NRC] adjudicatory proceeding.'' 10 C.F.R. § 2.335(a). *See also Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 218 (2003). By the same token, any contention that amounts to an attack on applicable statutory requirements must be rejected by a Licensing Board as outside the scope of its proceeding. *Public Service Co. of New*

Hampshire (Seabrook Station, Units 1 and 2), LBP-82-76, 16 NRC 1029, 1035 (1982) (citing *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20-21 (1974)). The NRC adjudicatory process is not the proper venue for the evaluation of a petitioner's personal view regarding the direction regulatory policy should take. *See id.*

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

Mere reference to previous enforcement history, without establishing a link between the prior history and the contention at issue, is insufficient to support a contention. ''In order for management integrity issues to be admissible, a contention must assert (and demonstrate) that the management personnel alleged to have acted improperly in the past are also going to be involved with the activity that is the subject of the current proceeding.'' *Georgia Tech,* CLI-95-12, 42 NRC at 120. For the Board to consider ''management 'character' [as] an appropriate issue for adjudication in a licensing proceeding, 'there must be some direct and obvious relationship between the character issues and the licensing action in dispute.' '' *Millstone,* CLI-01-24, 54 NRC at 365 (quoting *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 189 (1999)). Allegations of management improprieties must be of more than historical interest. *Georgia Tech,* CLI-95-12, 42 NRC at 120. The Commission has expressly stated that ''[w]e cannot allow admission of contentions premised on a general fear that a licensee cannot be trusted to follow regulations of any kind.'' *Millstone,* CLI-01-24, 54 NRC at 366. Integrity issues must be directly germane to the challenged licensing action to serve as the basis for an admissible contention.

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

A petitioner may not simply refer to voluminous documents, such as those on a Web site, without providing analysis demonstrating that those documents provide factual support for the proffered contention. *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-3, 29 NRC 234, 240-41 (1989). Mere reference to documents without indicating their significance, or explaining how the information contained therein supports the contention, cannot sustain the admissibility of a contention. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181 (1998); *see also Seabrook,* CLI-89-3, 29 NRC at 240-41.

NEPA: ENVIRONMENTAL REPORT (DESCRIPTION OF ENVIRONMENT AFFECTED)

NRC regulations require that an ER provide a ''description of the environment affected'' by a proposed project. 10 C.F.R. § 51.45(b). The purpose of this regulation is to identify resources for the NRC Staff, including cultural and historic resources, that could be reasonably expected to be adversely affected so the NRC can meet its obligations under NEPA, 42 U.S.C. § 4331(b)(2)(4), the National Historic Preservation Act (NHPA), 16 U.S.C. § 470f, and other relevant environmental statutes. This description (and subsequent discussion of impacts of the proposed action) is required so the Staff can assess the significance of the impact on the environment as part of its Draft Environmental Impact Statement (DEIS) and ultimately as part of the Final Environmental Impact Statement (FEIS). An applicant for a license to be issued by the NRC must describe the environment affected by its proposed action and must discuss the impact of the proposed action on that environment. Historic and cultural resources must be considered in this description of the environment affected. 42 U.S.C. § 4331(b)(4). The mere presence of historic or cultural resources in close proximity to the proposed activity, however, does not require a description in the ER. There must also be some demonstration of potential effect upon those resources before the failure to list the resources would constitute a deficiency in the ER. The ER must identify only sites that can reasonably be expected to be ''affected'' by the proposed federal action.

NATIONAL HISTORIC PRESERVATION ACT: REQUIREMENTS

The National Historic Preservation Act (NHPA) is a procedural statute designed to ensure consideration by federal agencies of the potential impact of their undertakings, including licensing decisions, upon historic properties. The NHPA requires agencies to inform interested persons and entities of the possible governmental action, and to consult with them to identify historic properties, assess the potential effects of the proposed action on these properties, and seek ways to avoid, minimize, or mitigate any adverse impact on the properties. Activities potentially covered by the NHPA include undertakings carried out by, or on behalf of, a federal agency and those activities, such as are presented here, requiring a federal license. 36 C.F.R. § 800.16(y). The NHPA is directed to federal agencies such as the NRC, not to license applicants. The NHPA requires that before a federal agency such as the NRC issues any license, it shall ''take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register.'' 16 U.S.C. § 470f. In addition, the NHPA requires that ''[t]he head of any such Federal agency shall afford the Advisory Council on Historic Preservation . . . a reasonable opportunity

to comment . . . .'' *Id.* The requirement to identify cultural and historic resources is imposed upon license applicants by 10 C.F.R. § 51.45(b), not by the NHPA.

NEPA: CONSIDERATION OF ALTERNATIVES

In its ER, an applicant is required to provide a discussion of alternatives to the proposed action that is sufficiently complete to aid the Commission in developing and exploring appropriate alternatives to the recommended course of action. 10 C.F.R. § 51.45(b)(3). However, in addition to a no-action alternative, only alternatives reasonably related to the goals of the proposed action, and the no-action alternative, need be considered. *See Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-93-3, 37 NRC 135, 144-45 (1993). The applicant is only required to consider feasible, nonspeculative alternatives, and the range of alternatives need not extend beyond those reasonably related to the purposes or goals of the proposed project. *See City of Carmel-by-the-Sea v. Department of Transportation,* 123 F.3d 1142, 1155 (9th Cir. 1997); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 65 (1991); *Citizens Against Burlington, Inc. v. Busey,* 938 F.2d 190, 195 (D.C. Cir. 1991); *Process Gas Consumers Group v. Department of Agriculture,* 694 F.2d 728, 769 (D.C. Cir. 1981). The ER need not evaluate the effects of alternatives that are only remote or speculative possibilities. *Natural Resources Defense Council v. Morton,* 458 F.2d 827, 838 (D.C. Cir. 1972).

MEMORANDUM AND ORDER
(Ruling on the Admissibility of Contentions)

Before the Board are two petitions to intervene related to the application of USEC Inc. (USEC) for authorization to possess and use source, byproduct, and special nuclear material to enrich uranium to a maximum of 10% uranium-235 (U_{235}) by the gas centrifuge process. USEC proposes to do this at a facility — denominated the American Centrifuge Plant (ACP) — to be constructed near Piketon, Ohio. The petitions were filed by the Portsmouth/Piketon Residents for Environmental Safety and Security (PRESS),[1] a public interest group representing the interests of various individuals who live in close proximity to the proposed ACP, and Geoffrey Sea (Sea),[2] an individual who has become the owner of, and a resident in, a private structure adjacent to the ACP. The Commission determined

[1] Petition To Intervene by Portsmouth/Piketon Residents for Environmental Safety and Security (PRESS) (Feb. 28, 2005) [hereinafter PRESS Petition To Intervene].

[2] Petition To Intervene by Geoffrey Sea (Feb. 28, 2005) [hereinafter Sea Petition To Intervene].

that both Petitioners have standing to intervene in this proceeding and referred their petitions to the Board for a determination of whether either, or both, has presented one or more admissible contentions.[3]

For the reasons set forth below, we find that neither PRESS nor Geoffrey Sea has submitted an admissible contention concerning USEC's application. Accordingly, we do not admit either petitioner as a party to this proceeding.

Before presenting our analysis of the admissibility of Petitioners' contentions, we first must address the multiple, nonidentical petitions to intervene filed by Mr. Sea. The Petitioner submitted his original petition electronically on February 28, 2005. This petition was timely filed.[4] Mr. Sea then submitted a modified petition that was substantively different from the electronically filed petition. This second petition to intervene, which conformed to the format requirements set out at 10 C.F.R. § 2.304(b), was submitted via Federal Express on March 1, 2005. However, the second petition, because it was substantively different from the document previously filed electronically, must be treated as a new petition.[5] As a new petition, it was not timely filed.

Pursuant to 10 C.F.R. § 2.302(a)(3), petitions to intervene in Commission proceedings may be filed by e-mail. However, such documents ''may be refused acceptance for filing'' (10 C.F.R. § 2.304(g)) unless, within two (2) days after the electronic filing, an original and two copies of these documents, in the format specified in section 2.304(b), are mailed to the Commission's Rulemakings and Adjudications Staff. 10 C.F.R. § 2.304(f). Because the documents Mr. Sea submitted via Federal Express on March 1, 2005, were substantively different from the documents initially filed electronically, the electronic version failed to comply with section 2.304(f), and could have been refused acceptance for filing.[6] Likewise, the mailed documents, which comply with the format requirements of 10 C.F.R. § 2.304(b), cannot be considered as filed on the date of the electronic submission because they were substantively different. Accordingly, the mailed documents were not timely filed. Furthermore, there was no petition (as required by 10 C.F.R. § 2.309(c)) requesting the Board to accept them as a nontimely filing.

---

[3] CLI-05-11, 61 NRC 309, 310 (2005).

[4] The initial deadline for filing a petition to intervene in this proceeding was December 17, 2004. 69 Fed. Reg. 61,411, 61,412 (Oct. 18, 2004). The deadline was subsequently extended to February 28, 2005. Commission Order (Granting Motions for Time Extension) (Dec. 29, 2004) (unpublished).

[5] *See* USEC Inc. Answer to Petition To Intervene by Geoffrey Sea (Mar. 23, 2005) [hereinafter USEC Answer to Sea Petition], Attachment A at 1-56. That document provides a clear description of the substantial differences between the two versions of the Sea Petition To Intervene.

[6] In this case, the Commission accepted the petition for filing, and ruled on the issue of standing. We need not revisit the Commission's decision to accept the electronic version of Mr. Sea's petition for filing.

In this case, because the documents sent to the Commission via Federal Express on March 1, 2005, were not timely filed and did not meet the requirements for late filing, only the electronically submitted petition is properly before this Board. Nevertheless, because of Mr. Sea's status as a *pro se* intervenor, the Board did fully consider all the information contained in the March 1st version of Mr. Sea's petition, as well as that contained in all of his subsequent filings.[7] We note that neither version of Mr. Sea's petition to intervene, nor any of his subsequent filings, contains information which adequately supports the admissibility of any of his proposed contentions.[8]

Before leaving this issue, the Board notes its belief that it is inimical to the conduct of an orderly adjudicative proceeding for a litigant to file nonidentical versions of any pleading. If an error or omission is noted by a litigant in a document that it has served and/or filed, the proper procedure is to file a document that is clearly marked as an amended or corrected version of the pleading, and to accompany that amended pleading with a motion requesting leave to substitute the amended pleading for the original. This motion should also fully explain the differences between the amended pleading and the original, as well as the circumstances justifying the filing of the amended pleading. *See* 10 C.F.R. § 2.323. Failure to follow such a procedure will ordinarily result in the second pleading being stricken. *See* 10 C.F.R. § 2.319.[9] As noted above, this may also result in the electronic version being rejected, because an ''original'' of the petition, which conforms with the requirements of section 2.304(b), will not have been submitted to the Agency. *See* 10 C.F.R. § 2.304(g).

I. BACKGROUND

On August 23, 2004, USEC filed an application with the NRC to obtain a 30-year 10 C.F.R. Part 70 license to operate its proposed ACP. This applica-

---

[7] *See, e.g.,* Geoffrey Sea's Motion for Leave To File an Amended Petition (July 18, 2005); Motion for Leave To Supplement Replies to USEC and the NRC Staff by Geoffrey Sea (Aug. 17, 2005); Supplement to Replies to USEC and the NRC Staff by Geoffrey Sea (Aug. 17, 2005); Amended Contentions of Geoffrey Sea (Aug. 17, 2005); Geoffrey Sea's Reply to Answer of USEC and Response of NRC Staff to Filings of August 17 (Sept. 6, 2005).

[8] Due to Mr. Sea's *pro se* status, this Board overlooked certain procedural defects associated with the version of his petition to intervene submitted via Federal Express on March 1, 2005, and fully reviewed and considered the full content of that petition, because we did not want to risk overlooking any significant fact based solely on a *pro se* litigant's lack of familiarity with the NRC Rules of Practice and Procedure.

[9] *See Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Unit 2), LBP-92-26, 36 NRC 191 (1992) (the striking of a pleading was viewed as an appropriate sanction to educate a litigant on the need to comply with NRC Rules of Practice and directives from the Board).

tion included a safety analysis report (SAR), an environmental report (ER), an emergency plan (EP), a physical security plan (PSP), and a fundamental nuclear material control plan (FNMCP). The proposed process at the ACP, which is intended to produce enriched uranium for use in commercial nuclear power plant fuel, is adequately described in the license application and need not be repeated here.

II. ANALYSIS

NRC regulations require that any individual, group, business, or governmental entity that wishes to intervene as a party in an adjudicatory proceeding addressing a proposed licensing action must (1) establish that it has standing; and (2) offer at least one admissible contention. 10 C.F.R. § 2.309(a).[10]

A. The Commission Has Determined That Both Petitioners Have Standing

Because the Commission has determined that both Petitioners have standing, the Board need not address that issue.

B. Standards Governing Contention Admissibility

An admissible contention must (1) provide a specific statement of the legal or factual issue sought to be raised; (2) provide a brief explanation of the basis for the contention; (3) demonstrate that the issue raised is within the scope of the proceeding; (4) demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding; (5) provide a concise statement of the alleged facts or expert opinions, including references to specific sources and documents, that support the petitioner's position and upon which the petitioner intends to rely at hearing; and (6) provide sufficient information to show that a genuine dispute exists with regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief. 10 C.F.R. § 2.309(f)(1)(i)-(vi).

---

[10] The current regulation covering, *inter alia,* contention requirements is 10 C.F.R. § 2.309, adopted on January 14, 2004, effective February 13, 2004. 69 Fed. Reg. 2182 (Jan. 14, 2004). The current regulation is, in pertinent part, substantially the same as the prior regulation, 10 C.F.R. § 2.714. The case law cited herein generally refers to the prior regulation or its predecessors.

The purpose of the contention rule is to ''focus litigation on concrete issues and result in a clearer and more focused record for decision.'' 69 Fed. Reg. at 2202.[11] The Commission has stated that it ''should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing.'' *Id.* The Commission has also emphasized that the rules on contention admissibility are ''strict by design.''[12] Failure to comply with any of these requirements is grounds for the dismissal of a contention. *Id.* at 2221.[13]

The application of these requirements has been further developed as summarized below.

1. Brief Explanation of the Basis for the Contention

A ''brief explanation of the basis for the contention'' is a necessary prerequisite of an admissible contention. 10 C.F.R. § 2.309(f)(1)(ii). ''[A] petitioner must provide some sort of minimal basis indicating the potential validity of the contention.'' 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989). The brief explanation helps define the scope of a contention — ''[t]he reach of a contention necessarily hinges upon its terms coupled with its stated bases.''[14]

2. Within the Scope of the Proceeding

A petitioner must demonstrate that the ''issue raised in the contention is within the scope of the proceeding,'' 10 C.F.R. § 2.309(f)(1)(iii), which is defined by the Commission in its initial hearing notice and order referring the proceeding to

---

[11] *See also Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council,* 435 U.S. 519, 553-54 (1978); *BPI v. AEC,* 502 F.2d 424, 428 (D.C. Cir. 1974); *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20 (1974).

[12] *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001), *petition for reconsideration denied,* CLI-02-1, 55 NRC 1 (2002).

[13] *See also Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999); *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155-56 (1991).

[14] *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 (1988), *aff'd sub nom. Massachusetts v. NRC,* 924 F.2d 311 (D.C. Cir. 1991), *cert. denied,* 502 U.S. 899 (1991). *See also Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 (2002).

the Licensing Board.[15] Any contention that falls outside the specified scope of the proceeding must be rejected.[16]

3. Materiality

A petitioner must demonstrate that the contention asserts an issue of law or fact that is material to the findings the NRC must make to support the action that is involved in the proceeding; that is, the petitioner must demonstrate that the subject matter of the contention would impact the grant or denial of a pending license application. 10 C.F.R. § 2.309(f)(1)(iv). ''Materiality'' requires that the petitioner show why the alleged error or omission is of possible consequence to the result of the proceeding.[17] This means that there must be some significant link between the claimed deficiency and either the health and safety of the public or of the environment.[18]

4. Concise Allegation of Supporting Facts or Expert Opinion

Contentions must be supported by ''a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue . . . together with references to the specific sources and documents on which [it] intends to rely to support its position.'' 10 C.F.R. § 2.309(f)(1)(v). It is the obligation of a petitioner to present the factual information and expert opinions necessary to adequately support its contention.[19] Failure to do so requires that the contention be rejected.[20]

Determining whether a contention is adequately supported by a concise allegation of the facts or expert opinion is not a hearing on the merits.[21] A petitioner does

---

[15] *See Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985).

[16] *See Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289-90 n.6 (1979).

[17] *Portland Cement Association v. Ruckelshaus,* 486 F.2d 375, 394 (D.C. Cir. 1973), *cert. denied sub nom. Portland Cement Corp. v. Administrator of EPA,* 417 U.S. 921 (1974).

[18] *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 75 (1996), *rev'd in part on other grounds,* CLI-96-7, 43 NRC 235 (1996). *See also Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 439-41 (2002), *petition for review denied,* CLI-03-12, 58 NRC 185, 191 (2003).

[19] *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 305, *vacated in part and remanded on other grounds,* CLI-95-10, 42 NRC 1, *and aff'd in part,* CLI-95-12, 42 NRC 111 (1995).

[20] *Palo Verde,* CLI-91-12, 34 NRC at 155.

[21] *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-106, 16 NRC 1649, 1654 (1982).

not have to prove its contention at the admissibility stage. However, supporting material provided by a petitioner, including those portions of the material that are not relied upon, is subject to Board scrutiny.[22] The contention admissibility threshold is less than is required at the summary disposition stage.[23] Although a ''Board may appropriately view Petitioners' support for its contention in a light that is favorable to the Petitioner,''[24] a petitioner must provide some support for his contention, either in the form of facts or expert testimony.

Under the standards for contention admissibility, ''[m]ere 'notice pleading' is insufficient.''[25] A contention will be inadmissible ''if the petitioner 'has offered no tangible information, no experts, no substantive affidavits,' but instead only 'bare assertions and speculation.' ''[26] Further, if a petitioner neglects to provide the requisite support for its contentions, the Board should not make assumptions of fact that favor the petitioner, or supply information that is lacking.[27] Likewise, providing any material or document as a basis for a contention, without setting forth an explanation of its significance, is inadequate to support the admission of the contention.[28]

At the contention admissibility stage, a petitioner must provide ''some alleged fact or facts in support of its position.''[29] This ''does not call upon the intervenor to make its case at this stage of the proceeding, but rather to indicate what facts or expert opinions, be it one fact or opinion or many, of which it is aware at that point in time which provide the basis for its contention.''[30] Nonetheless, a petitioner cannot satisfy this requirement by mere references to voluminous documents without providing analysis demonstrating that they provide factual support for the proposed contention.[31] In short, the information, facts, and expert

---

[22] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139 (2004); *Yankee Nuclear,* LBP-96-2, 43 NRC at 90.

[23] *See* 10 C.F.R. § 2.710(c). ''[A]t the contention filing stage the factual support necessary to show that a genuine dispute exists need not be in affidavit or formal evidentiary form and need not be of the quality necessary to withstand a summary disposition motion.'' 54 Fed. Reg. 33,168, 33,171 (Aug. 11, 1989).

[24] *Palo Verde,* CLI 91-12, 34 NRC at 155.

[25] *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003) (citing *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 208 (2000)).

[26] *Id.* (quoting *Oyster Creek,* CLI-00-6, 51 NRC at 208).

[27] *Georgia Tech,* LBP-95-6, 41 NRC at 305. *See also Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 422 (2001).

[28] *See Fansteel,* CLI-03-13, 58 NRC at 205.

[29] 54 Fed. Reg. at 33,170.

[30] *Id.*

[31] *See Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-3, 29 NRC 234, 240-41 (1989).

opinions provided by the petitioner will be examined by the Board to confirm that they do indeed indicate the existence of adequate support for the contention.[32]

5. Genuine Dispute Regarding Specific Portions of Application

All contentions must ''show that a genuine dispute exists'' with regard to the license application in question, challenge and identify either specific portions of, or alleged omissions from, the application, and provide the supporting reasons for each dispute. 10 C.F.R. § 2.309(f)(1)(vi). Any contention that fails directly to controvert the application, or that mistakenly asserts that the application does not address a relevant issue, may be dismissed.[33]

6. Challenges to NRC Regulations

In addition to the requirements set out above, with limited exceptions not applicable in this case, ''no rule or regulation of the Commission . . . is subject to attack . . . in any [NRC] adjudicatory proceeding.'' 10 C.F.R. § 2.335(a).[34] By the same token, any contention that amounts to an attack on applicable statutory requirements must be rejected by a licensing board as outside the scope of its proceeding.[35] The NRC adjudicatory process is not the proper venue for the evaluation of a petitioner's personal view regarding the direction regulatory policy should take.[36]

We apply the foregoing standards in making our rulings on the Petitioners' various contentions below.

C. Rulings on PRESS Contentions

PRESS submitted twenty-two contentions, of which seven are termed ''Safety Issues'' and six ''Environmental Issues.'' The remaining nine contentions were

---

[32] *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part on other grounds and remanded,* CLI-90-4, 31 NRC 333 (1990).

[33] *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 247-48 (1993), *petition for review declined,* CLI-94-2, 39 NRC 91 (1994). *See also Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992).

[34] *See also Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 218 (2003).

[35] *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-76, 16 NRC 1029, 1035 (1982) (*citing Peach Bottom,* ALAB-216, 8 AEC at 20-21).

[36] *See id.*

grouped into a general category. Contention 22, relating to gender discrimination, was subsequently withdrawn by PRESS.[37]

It is apparent to the Board, because PRESS's contentions were presented in a vague, disorganized, and repetitive fashion, that USEC and the NRC Staff had some difficulty understanding and responding to the PRESS petition.[38] Nonetheless, because PRESS is proceeding *pro se* and has attempted to present its numerous concerns regarding the proposed ACP, we address each contention in depth to ensure that we do not overlook any legitimate issue simply because of the way it is articulated.[39]

1. PRESS Contention #1: Criticality Monitoring Exemption

''Petitioners contend that USEC's request for an exemption from 10 CFR 70.25(e) is not justified.''[40]

In support of this contention, PRESS first claims that USEC's request for exemption from criticality monitoring of the cylinder storage yards is not justified, and states that ''[t]he ACP would handle a markedly increased number of cylinders compared with the GDP,'' and ''GDP exemptions ought not to be automatically transferred to the ACP.''[41] PRESS does not provide any foundation for its assumption that GDP exemptions will be ''automatically transferred'' to the ACP, but appears to rely on USEC's statement in its License Application (LA) that ''[s]imilar to the exemption granted for the GDP regarding criticality monitoring of the UF_6 [uranium hexafluoride] cylinder storage yards the following exemption from the requirements of 10 C.F.R. [§] 70.24 addressing criticality monitoring is

---

[37] Reply to NRC Staff's Response to Petitions To Intervene Filed by [PRESS] and Geoffrey Sea (Apr. 4, 2005) [hereinafter PRESS Reply] at 4.

[38] *See, e.g.,* USEC Inc. Answer to Petition To Intervene by [PRESS] (Mar. 23, 2005) at 18 [hereinafter USEC Answer to PRESS Petition] (stating that ''[d]espite running some 42 pages in length, [PRESS's] contentions are almost uniformly insubstantial and lacking in any reasonable basis . . . . Petitioner simply does not appear to have taken its responsibilities seriously . . . .'').

[39] We have set forth in this decision our specific findings with respect to each contention and each basis, with one overall exception. For numerous contentions, PRESS presents, as one of its bases, a bare reference to its Appendices D and E. These appendices consist of direct excerpts from 10 C.F.R. §§ 70.22 and 70.23. In no instance does PRESS provide any discussion related to its reference to the regulations. As noted above, a mere reference to a regulation, without explaining its significance or establishing any connection to the proffered contention, does not serve as a basis for the admissibility of any contention. These references are, therefore, not discussed in the body of this Memorandum and Order.

[40] We assume that PRESS intended to refer to section 70.24, not section 70.25.

[41] PRESS Petition To Intervene at 14. The GDP is the Gaseous Diffusion Plant, which operated at the Piketon site.

identified in Section 5.4.4 of [USEC's] License Application . . . .''[42] We fail to see, however, how USEC's use of the words ''[s]imilar to the exemption granted for the GDP'' translates into what PRESS appears to assume, which is that the GDP exemptions will be ''automatically transferred to the ACP.''

In its answer to PRESS's petition, USEC acknowledges that ''the amount of uranium-235 in the cylinder storage yards would 'exceed the threshold' for maintenance of a CAAS [criticality accident alarm system] set forth in 10 C.F.R. § 70.24,'' and notes, ''[t]hat is, of course, why it is seeking a specific exemption from the 10 C.F.R. § 70.24 CAAS requirements . . . .''[43] USEC further states that its application ''specifically addresses the exemption criteria [and] PRESS has made no effort to challenge USEC's compliance with those criteria . . . . [it] has failed to identify in any respect why the requested exemption is not 'authorized by law . . . will not endanger life or property or the common defense and security and [is] otherwise [not] in the public interest.' ''[44]

For its part, the NRC Staff, at the outset, challenges the logic and content of the contention, stating, ''[i]n light of the difference between the wording of the contention and the bases, it is unclear what issue PRESS wishes to litigate'' and ''[t]he contention should be rejected on this ground alone.''[45] The Staff goes on to address the proposed basis of the contention, asserting, as did USEC, that ''[n]owhere does PRESS challenge USEC's specific statements in support of its exemption request.''[46] The Board concludes that PRESS fails to provide sufficient information to show that a genuine dispute exists with the Applicant on a material issue of law or fact. This proffered basis therefore, does not support the contention.

PRESS also takes issue with USEC's statement that it has been ''deemed impractical'' to label each container located in restricted areas within the ACP, claiming that ''USEC has not indicated who has deemed it impractical to label each and every container, or their rationale.''[47] Impracticability, however, is not the standard for approval or denial of the requested exemption, and PRESS has not challenged USEC's compliance with the exemption criteria. With respect to these assertions, PRESS has also failed to raise any genuine dispute of material fact or law, to provide sufficient specificity, or to proffer facts or expert opinions to support its allegations.

---

[42] *Id.* at 13.

[43] USEC Answer to PRESS Petition at 21.

[44] *Id.* at 21-22 (citing 10 C.F.R. § 70.17).

[45] NRC Staff's Response to Petitions To Intervene Filed by [PRESS] and Geoffrey Sea (Mar. 25, 2005) at 29 [hereinafter NRC Staff Response].

[46] *Id.*

[47] PRESS Petition To Intervene at 14-15.

Additionally, as part of its second basis for Contention # 1, PRESS cites an NRC Violation Notice, Notice EA-98-012, which was issued to USEC in March 1998.[48] PRESS, however, fails to explain how this violation notice is related to its argument opposing the exemptions requested by USEC. The two alleged deficiencies cited in the notice of violation — one having to do with criticality safety posting and labeling requirements and the other addressing criticality safety training and qualification of personnel — have nothing to do with the exemption that is the subject of the contention. This basis does not provide support for PRESS Contention # 1.

In its final explanation of the basis for this contention, PRESS asserts that USEC's treatment of its criticality accident alarm system coverage ''lacks detail'' (apparently an alleged omission), but without any discussion of the purported effect or impact of such an omission, or of how the allegedly omitted material could (or should) affect our decision in this proceeding.[49] PRESS also cites what it characterizes as a ''questionable'' safety record on the part of USEC, stating that ''NRC has issued eight safety violations notices to USEC.''[50] PRESS, however, fails to explain how they relate to the ACP and this contention.

In support of this contention PRESS has merely stated that sufficient quantities of U_{235} are present to warrant maintenance of a CAAS absent the requested exemption. PRESS has neither directly controverted any aspect of the LA nor presented any genuine dispute of material fact or law. To receive a license, USEC must establish that it has met the requirements of the criticality monitoring and labeling regulations or, alternatively, that it has satisfied the relevant exemption requirements. As we noted above, *supra* pp. 596-98, however, an admissible contention must contain a concise allegation of supporting facts or expert opinion, and a contention is inadmissible if the petitioner has offered nothing more than ''bare assertions and speculation.''[51] Setting forth the existence of prior violations as a purported basis for a contention, without explaining their significance to the application, is inadequate to support the contention.[52]

PRESS merely describes the exemptions requested by USEC, and makes the bare assertion that they are ''not justified,'' without addressing the exemption criteria or providing any expert opinion or summary of facts explaining why the exemptions are not justified. For this reason alone, this contention is inadmissible.

---

[48] *Id.* at 15.

[49] *See id.* at 15-16. We also note here that no nexus whatsoever was made by PRESS between the management and procedures of the ACP and those previously used by USEC with respect to its ownership and operation of the GDP.

[50] *Id.* at 16.

[51] *Louisiana Energy Services, L.P.* (National Enrichment Facility), LBP-04-14, 60 NRC 40, 55 (2004).

[52] *See Fansteel,* CLI-03-13, 58 NRC at 205.

Also, PRESS's citation to past USEC violations issued by the NRC, without indicating any connection between these violations and USEC's current LA, does not provide support for the proposed contention.[53] In summary, PRESS has not supported this contention with fact or expert opinion and it does not raise a genuine dispute with regard to any part of the LA. Accordingly, PRESS Contention # 1 is not admitted.

2. PRESS Contention # 2: Radiation Work Permits

''USEC Inc. fails to specify, in its application, the approved procedures in which the Radiation Protection Manager may exempt the requirement for a Radiation Work Permit in certain Radiation Areas. Moreover, it fails to identify the specific Radiation Areas in which the Radiation Protection Manager may exempt the requirement for a Radiation Work Permit.''

PRESS alleges that USEC's LA is deficient because it does not specify the criteria that the Radiation Protection Manager would use to determine where, and whether, a radiation work permit could be dispensed with. Basis 2.1 for this contention reads, in its entirety:

> In chapter 4 of the Application, page 4-4, section 4.4.2, Radiation Work Permits, USEC says, ''The RPM may exempt the requirement for an RWP in certain RAs as specified in approved procedures.'' To paraphrase this by expanding the acronyms, this says that the Radiation Protection Manager may exempt the requirement for a Radiation Work Permit in certain Radiation Areas as specified in approved procedures.
>
> In Violations Notice EA-97-267 (''Twenty Four Security Failures,'' see section B.1) USEC demonstrated a relaxed approach to keeping unused security badges in an insecure place. One may expect USEC to adopt a similar approach to Radiation Work Permits.[54]

The NRC Staff, in its response, points out that section 4.4.3 of the Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility (NUREG-1520) — a document that received public comment prior to its adoption by the Commission, and which was produced to provide guidance to the Staff in its review process — ''indicates that an applicant need not submit the radiation protection procedures,'' but that ''an applicant's commitment to prepare written radiation protection procedures and Radiation Work Permits can be acceptable

---

[53] *See Dominion Nuclear Connecticut, Inc.* (Millstone Power Station, Unit 3), CLI-02-22, 56 NRC 213, 228 (2002).

[54] PRESS Petition To Intervene at 17.

if certain criteria are met.''[55] The Staff further notes that ''[a]lthough Staff guidance is not a regulation, PRESS offers no reason why [the allegedly missing] information would be necessary.''[56]

As correctly pointed out by the Staff, there is no regulatory requirement that an applicant submit its proposed radiation protection procedures at this stage of the application process. Because PRESS has not proffered any rationale or facts to indicate that it is necessary at this point, there is no support for a proposition that the LA is deficient. PRESS has not provided facts or expert opinion raising a material issue with regard to the adequacy of USEC's LA in this regard. Finally, PRESS's bald assertion that a previous, unrelated violation causes one to ''expect USEC to adopt a similar approach to Radiation Work Permits'' — presenting no nexus whatsoever between the cited violation and either USEC personnel or plans for ACP management and operations — adds nothing of substance to aid us in consideration of the admissibility of this contention.[57]

In summary, PRESS Contention # 2 is inadmissible due to PRESS's failure to present a valid challenge to the LA, its failure to provide facts or expert opinion explaining the significance of its assertion relating to USEC's previous violation, and its failure to establish a connection between a past violation notice and its assertions regarding radiation work permits.

3. PRESS Contention # 3: Cylinder Labeling

''Petitioners contend that USEC's request for exemption from labeling UF_6 cylinders is not warranted.''

The arguments presented in support of this contention are substantially similar to the arguments presented in support of PRESS Contention # 1 and, accordingly, we believe that it is neither necessary or appropriate for us to fully repeat our analysis of those arguments here. As explained in our discussion of PRESS Contention # 1, the Petitioner has neither challenged any specific portion of the LA nor provided any facts or expert opinion raising a material issue with regard to the adequacy of USEC's exemption requests. Accordingly, we do not admit PRESS Contention # 3.

---

[55] NRC Staff Response at 32.

[56] *Id.*

[57] *See Millstone,* CLI-02-22, 56 NRC at 228.

4. PRESS Contention #4: 10% Assay

''Petitioners contend that USEC has not demonstrated that it has a market for 10% assay U_{235}. Furthermore, USEC has exceeded its possession limit for enriched uranium previously.''

PRESS contends that the LA should not be granted because USEC has not demonstrated that it has a market for 10% assay U_{235} or that the market for 5% assay U_{235} would not be as economically viable as the market for 10% assay.[58] In addition, as its basis for this contention PRESS cites three enforcement actions in which the NRC determined that USEC exceeded its possession limit for enriched uranium.[59]

We see no support for admission of this contention, given PRESS's failure to provide any connection between its challenge to USEC's rationale for 10% assay and the matters at issue in this proceeding. Additionally, regarding the portion of this contention alleging that USEC previously exceeded its possession limits for enriched uranium, PRESS has not provided anything that indicates that the previous enforcement action is in any way related (let alone material) to any finding that the NRC must make with regard to USEC's application for a license to build, own, and operate the ACP.[60]

This contention is not within the scope of this proceeding, is not material to any finding that the NRC must make, lacks support in the form of facts or expert opinion, and does not raise a genuine dispute regarding any portion of the LA. Therefore, PRESS Contention #4 is inadmissible.

5. PRESS Contention #5: Domino Effect

''Petitioners contend that the Application exhibits no evidence that USEC has attempted to model the catastrophic scenario associated with centrifuge cascades: the 'Domino Effect.' Further, the petitioners contend that the Application has not exhibited sufficient design specification data to allow the public to assess the likelihood of the occurrence of such an accident. This is contrary to 10 C.F.R. 70.22(h)(2)(i)(1)(ii).''

PRESS contends that USEC has not attempted to model the ''domino effect'' scenario, which ''proceeds from the failure of one centrifuge . . . [and] [s]hrapnel from the failed centrifuge destroys adjacent centrifuges.''[61] PRESS asserts that the manufacture of 12,000 centrifuge machines, something USEC proposes to

---

[58] *See* PRESS Petition To Intervene at 18-20.

[59] *See id.* at 19-20.

[60] *See Millstone,* CLI-02-22, 56 NRC at 228.

[61] PRESS Petition To Intervene at 20.

do in connection with its proposed action, ''has to elevate the likelihood for a catastrophic event like the 'domino effect.' ''[62] PRESS also refers to three violation notices previously received by USEC relating to failure of actuator valves, cites a fourth violation notice relating to failure to declare an alert during a fire, and goes on to state (impliedly concluding from the noted violations) that ''[i]f there were a catastrophic event, it's not clear that USEC could be counted on to do the right thing . . . . Is it wise to allow a company to ramp up production to twenty new machines each day if they can't be trusted to fit actuator valves properly?''[63]

In its response, USEC points out that PRESS erroneously alleged an omission, because a ''centrifuge machine crash scenario'' was in fact evaluated in the Integrated Safety Analysis (ISA).[64] USEC explained that the centrifuge machines are designed to prevent the domino effect, because the design ''ensure[s] the debris generated from a centrifuge failure during operation remains confined in the machine.''[65] In this regard, USEC also calls our attention to section 2.1.2.2 of its ER, which states that ''the casing 'provides physical containment of components in the unlikely event of a catastrophic failure of the gas centrifuge machine.' ''[66]

As pointed out by the NRC Staff, PRESS fails to support its assertions in this contention with any expert opinion or fact, providing only a Web site address that discusses the domino effect, without providing any discussion of the reference or its relevance to its assertions.[67] Additionally, PRESS fails to discuss or analyze USEC's ISA, wherein material safety issues have been analyzed, and in which USEC did in fact address the safety concern asserted to have been not addressed.

Furthermore, the section of the NRC regulations cited by PRESS in this contention, 10 C.F.R. § 70.22(h)(2)(i)(1)(ii), requires that the applicant develop an emergency plan, and has nothing to do with PRESS's allegation that USEC has failed to adequately consider the impacts or likelihood of a ''domino effect'' event. It therefore provides no basis for admitting this contention. Furthermore, in this contention PRESS ignores the fact that USEC has submitted a proposed Emergency Plan in conformity with applicable NRC requirements. (*See* LA § 8.0 and ''Emergency Plan for the American Centrifuge Plant in Piketon, Ohio'' submitted with the LA.)

With respect to the violation notices cited by PRESS, mere reference to previous enforcement history, without establishing a link between the prior

---

[62] *Id.* at 21.

[63] *Id.* at 21-22.

[64] USEC Answer to PRESS Petition at 30.

[65] *Id.*

[66] *Id.*

[67] *See* NRC Staff Response at 35.

history and the contention at issue, is insufficient to support a contention and PRESS does not explain how these notices relate to the assertion in this contention that USEC has failed to consider the ''domino effect.''[68] In this respect, PRESS has again merely presented unrelated facts, bare assertions, and no analysis or expert opinion to support its conclusions. Accordingly, this contention concerning USEC's alleged failure to model a potentially catastrophic scenario is inadmissible both because it erroneously alleges an omission, and because the proposition is unsupported by expert or factual evidence. In this contention PRESS does not raise a genuine issue with regard to any matter that must be decided by the Commission. PRESS Contention # 5 is inadmissible.

6. PRESS Contention # 6: Health Risks

''Petitioners contend that ER 3.11 'Public and Occupational Health' dangerously underestimates the health risks and damage already effecting worker and public health as a result of operations on the site.''

PRESS provides seven purported bases in support of this contention. Basis 6.1 reads, in its entirety:

> In Chapter 3 of the Environmental Review, page 3-82, section 3.11, ''Public and Occupational Health,'' USEC says the following.
>
> > Air releases of radionuclides from the operations at the site result in radiation exposures to people in the vicinity well within regulatory limits.
>
> Petitioners submit all of the testimonials and information at the website of National Nuclear Workers for Justice (NNWJ) as evidence to support this contention [citing *http://www.nnwj.com*].[69]

Here PRESS has provided only brief, unexplained references to various documents, letters, ''worker testimonials,'' and reports that it alleges support the contention. Basis 6.1 relies on the National Nuclear Workers for Justice Web site, which contains a vast amount of information, some of which relates to USEC and some of which concerns issues that are not germane to this proceeding, such as references to the Environmental Protection Agency and worker compensation issues. PRESS neither indicates which information on the Web site it intends to

---

[68] *Id.*

[69] PRESS Petition To Intervene at 22-23. The National Nuclear Workers for Justice Web site appears to be a project of PRESS, and its stated mission is to ''actively seek[] to expose all human health effects caused by toxic exposure to environmental poisons that were 'hidden' from the workers and the public during and after the government officials implemented their national security goals.'' *See http://www.nnwj.com.*

rely upon as evidence to support this contention nor how any of this information supports its contention.

Basis 6.2 refers to a letter which PRESS states was addressed to the National Institute for Occupational Safety and Health (NIOSH) and signed by Daniel J. Minter, the President of Paper Allied-Industrial, Chemical and Energy International Union, AFL-CIO (PACE) Local 5-689, which, according to PRESS, states: ''There are an estimated 100 personal interviews that Dr. Michaels [we are not told anything about this individual] conducted on our Site assessment that NIOSH would have access to that would prove to be very helpful, as well as available congressional testimony available on the Web site.''[70] PRESS provides no further information. The letter is neither provided nor explained. Likewise, PRESS does not discuss the nature of the interview information, or how it would be helpful to support its proposed contention.

We address these first two bases together, due to their similarity. As we mentioned above, *supra* p. 597, petitioner may not simply refer to voluminous documents, such as those on a Web site, without providing analysis demonstrating that those documents provide factual support for the proffered contention.[71] Without detail, Bases 6.1 and 6.2 shed no light on PRESS's argument. The National Nuclear Workers for Justice Web site contains a variety of information related to numerous organizations and issues. Similarly, the quote from the letter in Basis 6.2 is proffered without further explanation, and without the full text of the letter, leaving us with a quote without context, and with no additional information explaining how the quote — or the letter — relates to PRESS's contention. Bases 6.1 and 6.2 thus do not provide factual or expert support for Contention # 6.

Basis 6.3 provides ''quotes . . . excerpted from one of two statements about serious accidents and other problems at the Portsmouth Gaseous Diffusion Plant.''[72] It appears that the statements were made by PRESS's President Vina Colley to the NRC at a public scoping meeting on January 18, 2005. These statements, however, refer to events that occurred before USEC was the certificate holder for the Gaseous Diffusion Plant. Furthermore, the section of the ER being challenged by PRESS involves the air release of radionuclides from operations at the site, not accidental releases. Finally, PRESS fails to provide the required explanation of how any of these past events bear on the issue in its contention, or any other statement in the ER or LA. These events occurred 13 or more years ago, and PRESS has not offered facts or expert opinions to provide the missing nexus

[70] PRESS Petition To Intervene at 23.

[71] *Seabrook,* CLI-89-3, 29 NRC at 240-41.

[72] PRESS Petition To Intervene at 23.

between the personal remarks of its president and its argument in Contention #6.[73] Basis 6.3 thus fails to support PRESS's contention.

PRESS's fourth basis for Contention #6 begins by stating: ''Typical testimonials by workers who were employed at the plant pre-USEC but presented as evidence here as to how bad conditions were and how important 'outside' monitoring is'' [again citing the National Nuclear Workers for Justice Web site].[74] Several of these testimonials, some of which criticize the Department of Energy's (DOE) activities with respect to the plant, were given by workers employed at the plant *pre-USEC.* These testimonials are from workers not associated with USEC, which make them irrelevant absent a clear nexus to the ACP. Likewise, Basis 6.4 does not indicate — and PRESS does not explain — how the statements relate in any way to the proffered contention, which deals with the treatment of releases of radionuclides in the ER.[75]

Basis 6.5, which apparently relates to fluoride incident regulations, references two reports by name and date.[76] Basis 6.6, relating to an Argonne National Laboratory (ANL) cylinder accidents report, references one document, an accident report dated February 21, 2005, without anything more.[77] PRESS does not provide these reports, nor does it provide any analysis of them. As discussed above in connection with Bases 6.1 and 6.2, referencing documents without providing the documents or even an explanation of their significance to the contention at hand is insufficient to support admissibility of a contention. Thus, Bases 6.3 through 6.6 fail for the same reasons as Bases 6.1 and 6.2; they do not provide factual or expert support for this contention.

Basis 6.7 relates to budget and funding, and discusses money allocated to ''the Lexington Office.'' PRESS states:

> How much of that . . . was actually paid to Piketon workers? Petitioner asked this of DOE in a printed list of questions over two months ago at the last DOE public hearing and has not to date received an answer to that or several other pertinent questions. . . . DOE must account to the public for how this tax money is being spent and it should be fully made public in USEC's filing papers.[78]

These vague allegations against DOE, regarding how it spends (or has spent) allocated funds, have no apparent relationship to PRESS's contention on the health effects of ongoing site operations, are beyond the scope of this proceeding,

---

[73] *See Millstone,* CLI-02-22, 56 NRC at 228.

[74] PRESS Petition To Intervene at 24.

[75] *Id.* at 25.

[76] *Id.* at 26.

[77] *See id.*

[78] *Id.*

and fail to raise any genuine dispute of material fact or law. PRESS has simply failed to provide any link between this proffered basis and proposed Contention 6, which deals with USEC's treatment in its ER of the release of radionuclides.

In summary, the bases proposed by PRESS to support Contention 6 are insufficient to support the admissibility of this contention because they are factually unsupported, are unrelated to the assertions in the contention, are outside the scope of this proceeding, and refer to Web sites and documents whose full text has not been provided and whose connection to the proffered contention has not been established. Therefore, PRESS Contention # 6 is inadmissable.

7. PRESS Contention # 7: 3.9% Feedstock

''Petitioners contend that USEC is primarily interested in LEU feedstock of about 3.9% assay. This is contrary to the general impression of the Application that the feedstock would be natural assay. Moreover, petitioners contend that 4000 (14-ton equivalent) containers of feedstock would be required per year, and that 3000 containers of product would be produced. Petitioners contend that USEC should have been more forthright in the Application and quoted these figures in addition to the figures for tails.''

In support of this contention, PRESS provides (1) a calculation of its estimate for the uranium concentration of the feedstock (Basis 7.1); (2) an estimate of the number of cylinders of feedstock, product, and tails used in the process and the daily traffic needed to handle the estimate of feedstock (Basis 7.2); (3) a reference to the USEC LA which PRESS claims supports its allegation that Low Enriched Uranium (LEU) will be used as feedstock (Basis 7.3); and (4) vague concerns over the Highly Enriched Uranium (HEU) program mentioned in USEC's ER (Basis 7.4).[79]

With respect to Basis 7.1, USEC and the NRC Staff both assert that PRESS's calculation is in error, and further, that the calculation is based on erroneous assumptions. For our part, even if PRESS's calculations were valid, we do not see how they support PRESS's contention that USEC was not forthright in its LA. With respect to Basis 7.2, PRESS does not explain the significance of its estimate of the number of cylinders to be used at the ACP, nor does PRESS allege an omission or error in USEC's LA. With respect to Bases 7.3 and 7.4, USEC represents that the LA states that LEU material may be used at the facility (ER § 1.1), and that part of this enriched uranium may be derived from LEU obtained by the federal government from the Russian government.[80] PRESS does not explain the significance of these claims or how they support this contention.

---

[79] *See id.* at 27-30.

[80] *See* USEC Answer to PRESS Petition at 36-37; NRC Staff Response at 39-40.

PRESS does not provide any support for the propositions that (1) the application deceptively implies that the feedstock would only be natural assay, or (2) the number of containers of feedstock or tails would be anything different than that presented in the license application. As such, this contention does not allege a deficiency in the LA or a failure to comply with NRC regulations. Even if PRESS's suppositions were correct, they do not raise a genuine dispute of material fact within the scope of this proceeding. Accordingly, PRESS Contention # 7 is inadmissable.

8. PRESS Contention # 8: Scioto Survey

''Petitioners contend that the use of an average figure for uranium concentration in the Scioto is a misleading way to characterize the transport of uranium in water. A full survey should be undertaken.''

In its basis for this contention, titled ''Misuse of average,'' PRESS provides an excerpt from Chapter 1 of USEC's license application outlining the discharge of uranium into the Scioto River.[81] PRESS, however, fails to explain why or how the use of an average concentration level is misleading or inadequate. In addition, PRESS fails to explain what a ''full survey'' is or what it would contain, or to indicate how it could answer questions relevant to its challenge to the pending license application. This contention is not supported by fact or expert opinion and does not raise any genuine issue of material fact or law. Accordingly, it is inadmissable.

9. PRESS Contention # 9: LLMW Exemption

''Petitioners contend that LLMW Exemption doesn't apply to material that was generated offsite. (See OAC 3745-226.)''

In support of this contention, PRESS cites to an Ohio regulation stating that low-level radioactive mixed waste (LLMW) is eligible for a conditional exemption from Resource Conservation and Recovery Act (RCRA) storage and treatment permit requirements ''if it is generated and managed . . . under a single . . . license. (Mixed waste generated at a facility with a different license number and shipped to your facility for storage or treatment requires a permit and is ineligible for this exemption . . . .).''[82] We agree with USEC that it is not apparent why PRESS believes that LLMW will be generated at another facility (i.e., ''offsite'') and

[81] *See* PRESS Petition To Intervene at 31.

[82] *Id.* at 32.

shipped to the ACP. USEC states that it has no plans to do so, and the portion of the ER quoted by PRESS makes no such statement.[83]

PRESS has not provided factual support for the implication in this contention that LLMW generated offsite will be shipped to the ACP, or for the proposition that RCRA matters are within the scope of this proceeding. In this contention PRESS has failed to raise a genuine issue with regard to any matter within the scope of this proceeding. Accordingly, PRESS Contention # 9 is inadmissible.

10. PRESS Contention # 10: Independent Environmental Reporting

''Petitioners contend that USEC has a very poor record of self-assessment, and that an independent assessment of the environmental base-state is justified.''

PRESS asserts that any assessment for the Environmental Impact Statement (EIS) should be performed by a third party because USEC ''cannot be relied upon to do that impartially,'' and because USEC ''has a documented history of misleading the NRC.''[84] PRESS then cites six enforcement actions taken against USEC for various events, including a failure to initiate an assessment and tracking report, and a failure to classify a fire incident as an alert. PRESS argues that ''USEC should not be entrusted with the responsibility for assessing the environmental state of the site.''[85]

Because the Staff bears the obligation under the National Environmental Policy Act (NEPA)[86] to prepare a full environmental impact statement (EIS) for any major federal action, including the granting or denial of a Part 70 license to USEC, the ''independent assessment' '' sought by Petitioners will be performed, and no genuine issue of material fact or law has been raised. In addition, as the NRC Staff correctly notes, to rely on past enforcement history as a basis for a contention, there must be a direct and obvious relationship between the character issues raised and the licensing action in dispute.[87] PRESS has failed to establish a direct and obvious relationship between these enforcement actions and the licensing action in dispute. PRESS has failed to dispute any portion of the LA, has not supported the contention with material facts, and has not presented a genuine dispute with regard to any issue to be decided by the NRC. Therefore, PRESS Contention # 10 is not admissible.

---

[83] *See* USEC Answer to PRESS Petition at 38-39.

[84] PRESS Petition To Intervene at 33.

[85] *Id.*

[86] *See* 42 U.S.C. § 4332(2)(C).

[87] *See* NRC Staff Response at 43.

11. PRESS Contention #11: Ground and Surface Water

''Petitioner contends that the Environmental Report (ER) 3-18 through 3-23 contained in the application does not contain a complete or adequate assessment of the potential environmental impacts of the proposed project on ground and surface water, contrary to the requirements of 10 CFR 51.45.''

PRESS states that USEC in its ER (ER 3.4 Water Resources, 3.4.1 Groundwater, and 3.4.2 Surface Water) fails to address certain concerns relating to potential impacts on ground and surface water. PRESS then offers five bases for its contention, which reference three separate reports, a quote from a letter from the Ohio EPA Southeast District Office (without supplying the letter itself), and a section of its own petition.[88] PRESS did not provide the three reports it cites, asserting as its reason the possibility that the reports contain '' 'security' information,'' and stating that it ''awaits NRC's directions'' regarding the documents.[89] PRESS, however, fails to explain the significance of any of these reports, or how they relate to USEC's LA. PRESS also fails to point to any specific deficiency in the ER, and, with regard to other portions of this contention, raises issues outside the scope of this proceeding, such as DOE compliance with RCRA.

In response to PRESS's determination not to provide these reports because they contain ''security information,'' the NRC Staff states that ''[a]lthough the Staff appreciates PRESS's concerns for security, PRESS offers no reasons why it could not provide some discussion of these reports and how the reports have any significance to the ER.''[90] We agree.

The bases offered by PRESS do not contain an explanation of the significance of the information cited therein. Bases 11.1, 11.2, and 11.3 cite reports without explaining how these reports support the contention. Basis 11.4 provides a quotation without any explanation. As we have repeatedly stated above, offering bare conclusions, without explaining the rationale behind those conclusions, and without even providing the documents on which they are purportedly based, provides no basis for admission of a contention.[91] This vague presentation by PRESS does not constitute an adequate statement of facts or expert opinion within the meaning of 10 C.F.R. § 2.309(f)(1)(v). Finally, DOE compliance with RCRA is outside the scope of this proceeding. Accordingly, PRESS Contention # 11 is inadmissible.

---

[88] *See* PRESS Petition to Intervene at 34-36.

[89] *Id.* at 34.

[90] NRC Staff Response at 44.

[91] *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181 (1998); *see also Seabrook,* CLI-89-3, 29 NRC at 240-41.

12. PRESS Contention # 12: Radiological Impacts

''Petitioners contend that ER 4.12.3.2 'Radiological Impacts' and 'Pathway Assessments,' 'Accident Analysis' and 'Public & Occupational Expose' is inadequate.''

Basis 12.1 again refers to various reports without providing copies of the reports or presenting analysis of their content from which the Board could evaluate their relevance. PRESS states that it ''will withhold public release of the location of these reports awaiting 'security' instructions from NRC.''[92] Basis 12.2 proffers quotations from correspondence PRESS received from Sergei Pashenko (again without providing the correspondence itself), in which Pashenko (described as a Russian scientist who has been researching aerosols and their dispersion in the atmosphere since 1975) makes bare conclusory remarks with respect to which PRESS offers no explanation or analysis.[93]

PRESS does not discuss either the content or the significance of the reports it cites. Likewise, it does not identify any error or omission in the ER. USEC describes the quotations from the Pashenko correspondence as ''so unintelligible that even PRESS makes no 'attempt to interpret the language,' '' and argues that the basis thus ''fails to provide the requisite level of clarity and specificity to support this contention.''[94] The NRC Staff's arguments echo those of USEC.[95] We do not see that anything presented by PRESS originating from Pashenko supports PRESS's contention. PRESS's reference to the Pashenko correspondence without explanation or analysis does not provide an adequate basis to support the admissibility of a contention.[96] PRESS Contention # 12 is, therefore, inadmissable.

13. PRESS Contention # 13: D & D Plans Inadequate

''Petitioners contend that ER 4.13.2.4 'Operations Phase Feed Withdrawal, and Customer Services Facilities' does not contain viable Decontamination & Decommissioning plans or adequate information about radioactive and hazardous materials.''

---

[92] PRESS Petition To Intervene at 36.

[93] *See id.* at 36-37. Sergei Pashenko's resumé is included as Attachment C to PRESS's petition. We do not reach the issue of whether Sergei Pashenko qualifies as an expert because his conclusions are of no assistance to this Board, due to PRESS's failure to provide any accompanying explanation or analysis.

[94] USEC Answer to PRESS Petition at 44.

[95] *See* NRC Staff Response at 45-47.

[96] *See Commonwealth Edison Co.* (Braidwood Nuclear Power Station, Units 1 and 2) LBP-85-20, 21 NRC 1732, 1741 (1985); *Private Fuel Storage,* LBP-98-7, 47 NRC at 181.

PRESS asserts that USEC's application is deficient because ''[d]isposal facilities must be identified and accompanied by statements from the facilities that they will receive them and the cost.''[97] It offers no support for this proposition.

PRESS's challenges to the ER in this contention are impermissible under several NRC regulations. As to the portion of this contention addressing decontamination and decommissioning plans, (1) the ER is not required to include a decommissioning plan (DP) or a decommissioning funding plan (DFP), 10 C.F.R. Part 51; (2) the DP is not required to be submitted until the license expires or the Licensee has ceased principal operations, 10 C.F.R. § 70.38(d); and (3) the DFP submitted with the application is not required to include statements from disposal facilities indicating that they will accept ACP wastes, 10 C.F.R. § 70.25(e).

Although 10 C.F.R. § 70.25 requires the submission of a decommissioning funding plan, this plan must contain only a cost estimate for decommissioning and a description of the method for assuring funds for decommissioning. 10 C.F.R. § 70.25(e). As noted by the NRC Staff in its response to PRESS's Petition, ''[t]he purpose of this plan is to determine whether the applicant has considered what decommissioning activities may be needed in the future, has performed a credible site-specific cost estimate for those activities and has submitted sufficient financial assurance to cover the cost of those activities in the future.''[98] USEC has addressed these requirements in its LA in Chapter 10, and PRESS has not offered any specific challenge to any portion of the LA.

With regard to PRESS's assertion that ''ER 4.13.2.4 . . . does not contain . . . adequate information about radioactive and hazardous materials,'' we note that the ER section to which PRESS is probably referring is section 4.13.3.4 (section 4.13.2.4, to which PRESS did refer, does not exist). But that section is not intended to address radioactive or hazardous materials. Other sections of the ER do, however, provide extensive discussions and analyses of such materials (*see, e.g.,* ER §§ 3.12 and 4.13).

PRESS has not offered a discussion or criticism of the cost information provided by USEC, has failed to challenge any portion of the application with specificity, and has failed to explain why, under the Commission's regulations, it believes the information provided is insufficient. For these reasons, PRESS has not raised any genuine issue of material fact in this contention and, accordingly, PRESS Contention # 13 is inadmissible.

---

[97] PRESS Petition To Intervene at 38.

[98] NRC Staff Response at 48 (citing NUREG-1520 at 10-1).

14. PRESS Contention # 14: Application Inadequate

''The Fundamental Nuclear Materials Control Plan (FNMCP) doesn't satisfy the requirements of 10 CFR 74.13(a), therefore the application is inadequate.''

As its sole basis for this contention, PRESS quotes a portion of Chapter 1 of USEC's LA in which USEC requests an exemption from portions of 10 C.F.R. § 74.13(a).[99] However, as both USEC and the NRC Staff note in their responses, PRESS neither addresses the criteria for granting such an exemption nor provides any discussion of why USEC's requested exemption should not be granted.[100] PRESS failed to provide any basis for the contention and has not raised any genuine dispute with regard to any issue of material fact or law. PRESS Contention # 14 is inadmissable.

15. PRESS Contention # 15: National Security

''Petitioners contend that USEC hasn't demonstrated that ACP would advance national security goals. The editorial of Congressman David Hobson suggests that it may well be the opposite.''

In Basis 15.1, PRESS quotes former Secretary of Energy Spencer Abraham as referring to nuclear energy as ''clean, affordable and reliable,'' and stating that ''USEC, and its partners in the nuclear industry, continue to take important steps enhancing national energy security with private sector development of advanced American technology.''[101] We fail to see how this statement supports PRESS's contention — the statement clearly indicates support for USEC and its efforts.

Basis 15.2 quotes the ER, in which USEC states that ''[t]he ACP is a crucial step toward advancing the national energy security goal of maintaining a reliable and economical domestic source of enriched uranium.''[102] PRESS then cites a 2005 *Washington Times* editorial written by Congressman David Hobson, in which Hobson states that the United States ''send[s] the wrong signal to the rest of the world'' when it ''embark[s] on new weapons and testing initiatives.''[103] PRESS further states, without reference to the Hobson article or any other source, that ''[m]uch of the pressure on Iran and N. Korea stems from their pursuit of centrifuge uranium enrichment'' and then argues that ''the ACP would risk our national security.''[104] Basis 15.3 urges the Commission to ''determine that the

---

[99] *See* PRESS Petition To Intervene at 38.

[100] *See* USEC Answer to PRESS Petition at 45-46; NRC Staff Response at 49-50.

[101] PRESS Petition To Intervene at 39.

[102] *Id.*

[103] *Id.* at 40.

[104] *Id.*

issuance of a license for the ACP would be inimical to the common defense and security of the United States, and deny the license.''[105]

PRESS's policy preference for a ban on uranium enrichment does not raise a litigable issue in this proceeding.[106] Likewise, PRESS's reliance on the Hobson editorial is misplaced. The statements quoted from the editorial, which was attached by PRESS as Appendix A to its Petition to Intervene, focus on nuclear weapons initiatives, not enrichment technology. PRESS has not offered any facts or expert opinion to support its contention that the proposed ACP would be inimical to the common defense and security. Thus, PRESS has not raised a genuine dispute with regard to any issue of material fact or law with this contention and, therefore, PRESS Contention # 15 is not admitted.

16. PRESS Contention # 16: Alternative Site Use

''Petitioners contend that the no-action alternative is more beneficial to the site than the proposed action. Piketon could be an industrial heaven employing many thousands if it were cleaned up. USEC will block alternative uses because of the security arrangements that would have to be made.''

Basis 16.1 states that the no-action alternative should be considered relative to other potential uses of the site, rather than in connection with USEC's proposed use of the site. PRESS, however, offers no response to, or criticism of, USEC's discussion of the no-action alternative in its ER. Similarly, Basis 16.2 argues that Atomic Vapor Laser Isotopic Separation (AVLIS) is a reasonable alternative, again without any response to, or criticism of, the analysis of AVLIS contained in the ER.[107]

Contrary to PRESS's allegation, USEC did examine and comment on the impacts of the no-action alternative on the site in section 4 of its ER and PRESS has failed to identify any error or omission in the application in that regard. In addition, as USEC notes, ''the purpose and need for the ACP is to provide enriched uranium,''[108] and thus, aside from the no-action alternative, USEC was only required to discuss alternatives that produce enriched uranium. Finally, USEC did consider AVLIS as an alternative, eliminated it, and adequately stated its reasons for doing so in the ER.[109]

---

[105] *Id.*

[106] *Peach Bottom,* ALAB-216, 8 AEC at 21 n.33, *aff'd on other grounds,* CLI-74-32, 8 AEC 217 (1974).

[107] *See* PRESS Petition To Intervene at 41.

[108] USEC Answer to PRESS Petition at 48.

[109] *See* USEC ER § 2.2.

Although PRESS has quite clearly expressed its preference for an alternative use for this site, it has failed to offer any specific criticism of the application or any legal or factual basis to support its contention. PRESS has failed to raise any genuine dispute of material fact or law that is within the scope of this proceeding. Accordingly, PRESS Contention # 16 is inadmissible.

17. PRESS Contention # 17: ACP Project Failure

''Petitioners contend that USEC's request for incremental payment is a symptom of its weak financial position.''

PRESS states that ''USEC doesn't provide any assurance that its centrifuge plans won't go the way of its AVLIS plans,'' and describes a past event in which USEC's stock price dropped after it abandoned its pursuit of AVLIS, implying that this indicates that USEC is not financially qualified to build, own, and operate the ACP.[110] Further, PRESS asks ''[w]hat effect would [decontamination and decommissioning] at Paducah have on USEC's ability to pay for ACP development and operation?''[111]

USEC, in its response, expresses confusion over PRESS's reference to ''incremental payment,'' stating that it is not sure if it refers to ''USEC's plans to incrementally build the ACP, incrementally fund tails disposition costs, or something else.''[112] USEC accurately asserts that the basis for concluding that it has the financial qualifications to construct and operate the ACP is set out in the application.[113] The NRC Staff states that ''PRESS's assertion lacks any basis or explanation.''[114] The NRC Staff also describes as irrelevant PRESS's concerns about the impact of decommissioning the Paducah facility on USEC's financial capacity to build and operate the ACP because USEC was required, specifically and separately, with regard to the Paducah GDP, to set aside funds for its decommissioning.[115]

PRESS has not presented any criticism of USEC's submission (which includes a section devoted to its financial qualifications) or any fact or expert opinion that support the proposition that USEC is not financially qualified to build, own, and operate the ACP. Accordingly, there is no genuine dispute with regard to any issue of material fact or law proffered by this contention and, therefore, PRESS Contention # 17 is not admitted.

---

[110] PRESS Petition To Intervene at 42.

[111] *Id.*

[112] USEC Answer to PRESS Petition at 48-49.

[113] *See id.* at 49.

[114] NRC Staff Response at 54.

[115] *See id.*

18. PRESS Contention #18: USEC Incompetence

''Petitioner contends that as the leading violator of the NRC materials licensees, USEC is incompetent to hold a license to operate a centrifuge plant.''

In support of this contention Petitioners cite various NRC enforcement actions taken against USEC between 5 and 7 years ago.[116] Based on this record, PRESS concludes that ''USEC has a documented culture of reluctance to comply with . . . regulations regarding nuclear criticality safety.''[117] PRESS further asserts that because USEC has a documented record of utilizing untrained workers, discriminating against employees for engaging in protected activities, and repeatedly committing safety violations, it should not be trusted with the operation of a facility as complex and potentially dangerous as the ACP.[118]

As noted above, and as specifically noted by the NRC Staff in response to this contention, ''In order for management integrity issues to be admissible, a contention must assert (and demonstrate) that the management personnel alleged to have acted improperly in the past are also going to be involved with the activity that is the subject of the current proceeding.''[119] PRESS has not alleged that any of the enforcement actions involved managers or individuals who would be working at the ACP. Further, PRESS has provided no reason for us to reach that conclusion, because the violations cited by PRESS occurred over 5 years ago and at different facilities operating under different regulations. As such, PRESS has failed to provide a nexus between the violations and the ACP.

As explained above, for this Board to consider ''management 'character' [as] an appropriate basis for adjudication in a licensing proceeding, 'there must be some direct and obvious relationship between the character issues and the licensing action in dispute.' ''[120] Allegations of management improprieties must be of more than historical interest.[121] The Commission has expressly stated that ''[w]e cannot allow admission of contentions premised on a general fear that a licensee cannot be trusted to follow regulations of any kind.''[122] Integrity issues must be directly germane to the challenged licensing action to serve as the basis for an admissible contention.

---

[116] *See* PRESS Petition To Intervene at 42-44.

[117] *Id.* at 44.

[118] *See id.* at 44-47.

[119] NRC Staff Response at 55 (citing *Georgia Tech,* CLI-95-12, 42 NRC at 120; *Vogtle,* CLI-93-16, 38 NRC at 36).

[120] *Millstone,* CLI-01-24, 54 NRC at 365 (quoting *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 189 (1999)).

[121] *Georgia Tech,* CLI-95-12, 42 NRC at 120.

[122] *Millstone,* CLI-01-24, 54 NRC at 366.

It is proper, in determining whether to grant USEC the license it seeks, to evaluate whether the company, as presently organized and staffed, can provide reasonable assurance of candor, willingness, and ability to follow NRC regulations. If USEC's current management is unfit, it would be a cause to deny the license.[123] Here, however, PRESS has not presented any information indicating that any person or procedure associated with past violations will be employed at, or involved with, the ACP. Therefore PRESS has not raised a genuine dispute with regard to a material issue of fact or law.[124] Accordingly, PRESS Contention # 18 is inadmissible.

19. PRESS Contention # 19: Enrichment Freeze

''Petitioner contends that there may be an international freeze on uranium enrichment. In that case USEC would not be able to survive.''

PRESS cites to a Carnegie Report (again, without providing the document) for the proposition that there may be an international freeze on the enrichment of uranium and that, if such an event were to occur, USEC would not be economically viable.[125] PRESS's assertions, even if accurate, would be insufficient to support its contention.[126]

PRESS does not provide any facts or expert opinion to support this contention, only speculation about USEC's future financial capabilities. Accordingly, PRESS has not raised a genuine issue of material fact or law with regard to this contention. To the extent that this contention can be construed as aimed at USEC's financial qualifications, it provides no nexus to that concern or any specific criticism of the financial qualifications of USEC that are set out in the LA. Moreover, this contention raises issues of international policy that are unrelated to the licensing criteria of the NRC and so are beyond the scope of this proceeding. For these reasons, PRESS Contention # 19 is inadmissible.

---

[123] *Georgia Tech,* CLI-95-12, 42 NRC at 120-21.

[124] *See Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), CLI-85-9, 21 NRC 1118, 1128 (1985) (personnel changes diminished significance of violations alleged to have occurred 6 years before).

[125] *See* PRESS Petition To Intervene at 47-48.

[126] We note that USEC has represented that the Carnegie Endowment for International Peace has now issued its final report, in which it abandoned its original recommendation. *See* USEC Answer to PRESS Petition at 51. Regrettably, USEC failed to supply a copy of the final Carnegie report.

20. PRESS Contention # 20: Need for Proposed Action

''Petitioners contend that there is no need for the proposed action. The future of power generated by enriched uranium is very uncertain. There is a growing understanding among decision makers that nuclear power is not only unsafe and generating huge amounts of dangerous wastes but is also expensive and unnecessary.''

PRESS presents eight bases to support Contention # 20.[127] Basis 20.1 references a report by the Energy Information Administration[128] which, PRESS asserts, indicates that nuclear power will become more expensive over the next 20 years. Basis 20.2 quotes (without providing the article) a 2004 *Wall Street Journal* article stating that ''the move to adopt renewable energy resources is gaining momentum.''[129] Basis 20.3 references a 2005 article (also not provided) from *Business Week* which, PRESS says, contains information about certain companies making a move toward renewable sources of energy, such as solar panels. Basis 20.4 cites ''leading authorities'' (without naming these authorities, providing their statements, or providing the documents in which the statements may be found) as ''calling for a 'production pause' in nuclear enrichment facilities,'' and PRESS states that ''NRC must consider that by the time ACP is ready for operation such a pause might be in effect.''[130] Basis 20.5 references a draft Carnegie Report and a United Nations report (without providing either), both dealing with concerns about nuclear security. PRESS cites these reports without additional explanation. Basis 20.6 references a national Sierra Club advertisement campaign stating that ''[w]e can free ourselves from dangerous nuclear power and the polluting industries of the past by investing now in 21st Century solutions.''[131] Basis 20.7 states: ''If the Megatons to megawatts program were accelerated and expanded to accommodate the megatons, perhaps that would obviate the necessity for a centrifuge plant. This should be considered as an alternative to licensing the ACP.''[132]

Although PRESS labels this contention ''Need for Proposed Action,'' it does not offer any analysis of USEC's discussion of need. This contention is based wholly on speculation, it makes references to statements and documents without

---

[127] *See* PRESS Petition To Intervene at 48-51. PRESS lists a basis 20.8 that simply states ''see also section D.1.2.'' *See* note 39, above, in which we explain that a mere reference to a regulation, without explaining its significance or establishing any connection to the proffered contention, does not serve as a basis for the admissibility of any contention. Accordingly, in ruling on the admissibility of this contention we only discuss PRESS's Bases 20.1 through 20.7.

[128] This report was not provided with PRESS's petition to intervene.

[129] PRESS Petition To Intervene at 49.

[130] *Id.*

[131] *Id.* at 51.

[132] *Id.*

providing them, fails to present facts or expert opinion to support the contention, fails to challenge any specific portion of the application, makes vague and general assertions without nexus to the pending application, raises policy questions outside the scope of this proceeding, and raises no genuine issue of fact or law. Therefore, PRESS Contention # 20 is inadmissable.

21. PRESS Contention # 21: Unnecessary Censorship

''Petitioners contend that some of the public censorship of the USEC documents was unnecessary.''

USEC states that most of the documents that PRESS contends have been improperly ''censored'' are now publicly available on ADAMS.[133] With regard to the remaining documents, USEC alleges that they were properly withheld pursuant to 10 C.F.R. § 2.390.[134] Whether or not the censored material is or was available, PRESS has not suggested any issue with regard to the LA or the ER that might have been implicated by this ''censorship'' and thus fails to raise a genuine dispute with regard to any issue of material fact or law in this contention. Accordingly, PRESS Contention # 21 is not admitted.

22. PRESS Contention # 22: Gender Discrimination

This contention regarding gender discrimination was withdrawn by PRESS.[135]

D. Rulings on Geoffrey Sea's Contentions

We begin by noting that on August 17, 2005, petitioner Geoffrey Sea electronically submitted what he captioned ''Motion for Leave To Supplement Replies to USEC and the NRC Staff by Geoffrey Sea.'' This document was accompanied by Amended Contentions, which purported to amend the bases for Mr. Sea's existing contentions because of newly acquired information.[136] The petition referred to various exhibits, only some of which were submitted electronically. Mr. Sea represented that the exhibits not submitted electronically would be submitted

---

[133] *See* USEC Answer to PRESS Petition at 54. ADAMS is an acronym for the NRC's Agencywide Documents Access and Management System.

[134] *See id.*

[135] *See* PRESS Reply at 4, 7.

[136] Amended Contentions of Geoffrey Sea (Aug. 17, 2005) at 1 [hereinafter Sea Amended Contentions].

with the mailed version of the petition.[137] According to the Certificate of Service submitted by Petitioner, these documents were sent via the United States Postal Service on August 17, 2005, to Administrative Judges McDade, Abramson, and Wardwell (as well as several others); however, they were not received by the Board until August 31, 2005. Despite the delay, the Board considered all information submitted by Mr. Sea in reaching the following conclusions.[138]

1. Assessment of Cultural Resources

a. Sea Contention # 1.1

''USEC has failed to identify cultural resources potentially impacted by the American Centrifuge Plant.''

In this contention, Mr. Sea claims that USEC failed to identify historic and cultural resources that might be impacted by the project. In particular, the Petitioner identifies two prehistoric sites that are listed on the National Register of Historic Places: Piketon Works and the Scioto Township Works. Mr. Sea alleges an error of omission in that these sites were not identified by USEC in its ER.[139]

NRC regulations require that an ER provide a ''description of the environment affected'' by a proposed project.[140] 10 C.F.R. § 51.45(b).[141] The obvious purpose of this regulation is to identify resources for the NRC Staff, including cultural

---

[137] These documents included Exhibit BB (Photograph of the part of the entrance to the Southwest Access Road . . . .); Exhibit CC (Excerpts from the lease agreement between DOE and USEC); Exhibit DD (USEC promotional brochure for the ACP); copies of curriculum vitae for John Hancock, Frank Cowan, and Cathryn Long, which are referred to in Exhibit AA; and a DOE OIG Audit report which is referred to as Exhibit A to Petitioner's Exhibit FF (Declaration of Geoffrey Sea).

[138] The possibility of filing an Amended Petition was raised by Mr. Sea during our prehearing conference on July 19, 2005. *See* Prehearing Conference Tr. at 65. At the conference the Board expressly advised Mr. Sea to submit any additional materials ''as quickly as you reasonably can.'' *Id.* at 66. However, we went on to state that the idea is not to have things submitted ''in dribbles and drabs.'' *Id.* In light of this Board's instruction to Mr. Sea, we find that he did submit his additional materials in a timely fashion and, accordingly, they were fully considered by the Board.

[139] Petition To Intervene by Geoffrey Sea (Feb. 28, 2005) at 14 [hereinafter Sea Petition To Intervene]. Mr. Sea also identifies the Barnes, Sargents, and Rittenours homes as threatened cultural resources that he contends are eligible for inclusion on the National Register. *Id.* at 22.

[140] We construe the phrase ''description of the environment affected'' in 10 C.F.R .§ 51.45(b) to mean an inventory of resources in the general area surrounding a project that can reasonably be expected to be affected by the project. Once the environment is described/inventoried, the Applicant must then discuss, among other things, the potential impact on these sites.

[141] *See also* NUREG-1748, ''Environmental Review Guidance for Licensing Actions Associated with NMSS Programs'' (Aug. 2003), which advises an Applicant of the information that the NRC believes should be included in the ER, including a discussion of the impact of the proposed action on historic and cultural resources in the surrounding area.

and historic resources, that could be reasonably expected to be adversely affected so the NRC can meet its obligations under NEPA, 42 U.S.C. § 4331(b)(2)(4), the National Historical Preservation Act (NHPA), 16 U.S.C. § 470f, and other relevant environmental statutes. This description (and subsequent discussion of impacts of the proposed action) is required so the Agency can assess the significance of the impact on the environment as part of its Draft Environmental Impact Statement (DEIS) and ultimately as part of the Final Environmental Impact Statement (FEIS). Thus, in our view, this description should include an inventory of historic, cultural, and natural aspects of national heritage in the area which could reasonably be expected to be affected by the Agency's action.

The NRC Staff does not oppose the admission of this contention ''to the extent that it is based on the claim that the Applicant's ER does not adequately take into account the cultural and historical impacts within the appropriate area of potential impacts.''[142] The Staff further stated that the contention presents a genuine dispute to the extent it asserts ''that the ER considered an incorrect 'area of potential effects' [because it] improperly omitt[ed] two sites listed on the National Register.''[143] The Staff does assert, however, that Sea's request to consider issues involving past DOE compliance with the NHPA exceeds the scope of this proceeding, and should be excluded.[144]

As his basis for this contention, Petitioner cites USEC's statement in its ER that ''[t]here are no . . . cultural, historical or visual resources that will be adversely affected by the refurbishment, construction or operation of the ACP at the DOE reservation in Piketon, Ohio,'' and asserts that USEC failed to consider the two National Register sites that are ''in immediate proximity to the proposed ACP.''[145] The portion of USEC's ER cited by Mr. Sea, however, does not expressly state that the Applicant did not consider those offsite properties but only that no such resources would be adversely affected. Therefore, without more, we cannot construe the quoted sentence from the ER to demonstrate a failure by the Applicant to ''consider'' those resources in its ER.

We do not believe that the mere presence of historic or cultural resources in close proximity to the proposed activity, standing alone, requires a description in the ER. Rather, the governing regulation, 10 C.F.R. § 51.45(b), requires that

---

[142] NRC Staff Response at 11.

[143] *Id.* at 12.

[144] *Id.* at 12-13.

[145] Sea Petition To Intervene at 14. In support of the contention Petitioner also submitted, *inter alia,* letters from Professors Kennedy and Hancock, and a letter from Karen Kaniatobe, the Tribal Historic Preservation Officer for the Shawnee Tribe, attesting to the historic and cultural significance of ancient earthworks located near the proposed ACP site. Petitioner also submitted a letter from Mr. Charles Beegle regarding the historic significance of the Scioto Trail Farm which is also located near the proposed ACP site. *Id.*

the ER identify the ''environment affected,'' and we find no basis for construing the regulation to require identification of every portion of the environment that might, even in the remotest of possibilities, be affected. There must be some demonstration of potential effect upon those resources before the failure to list the resources would constitute a deficiency in the ER. We believe that the appropriate interpretation of section 51.45(b) is that the ER *must* identify *only* sites that can reasonably be expected to be ''affected'' by the proposed federal action, thereby alerting the Agency to the need to examine the potential impacts upon those sites.

With his proposed Amended Contentions submitted electronically on August 17, 2005, Mr. Sea provided additional evidence to establish that there may be cultural and historic resources in close proximity to the proposed ACP. What he did not do, however, is provide facts or expert opinion supporting the proposition that the construction or operation of the ACP could reasonably be expected to adversely impact those cultural and historic resources. Instead, Mr. Sea offers the opinion of an archaeologist that ''Whether pumping of water from beneath the structure damages the structure is a question that should be evaluated by hydrology experts'' and then offers his personal opinion that the ''[p]otential impacts are obvious . . . .''[146] The impacts of such an activity are not obvious to this Board.

Petitioner has not supported this contention by offering facts or expert opinion that indicate that the construction or operation of the proposed ACP can reasonably be expected to affect the historic and cultural resources he has identified. Instead, Mr. Sea presents speculation which, as we have repeatedly discussed above, does not serve as the basis for the admission of a contention.[147]

Furthermore, Petitioner has not pointed to any specific NRC requirement that USEC failed to meet in its LA or ER, and the Board cannot assume that there are facts somewhere that might support the proposition that these resources can reasonably be expected to be affected by the ACP.[148] Accordingly, because this contention is not adequately supported by facts or expert opinion, and does not raise a genuine dispute of material fact or law, Sea Contention # 1.1 is not admitted.

Moreover, the underlying regulation which prescribes content of the ER, 10 C.F.R. § 51.45(b), has a primary purpose of alerting the NRC to the need to examine these identified sites for environmental impact. In this instance, what is alleged here are certain specific *omissions* from the ER (the National Register sites identified by Petitioner), and the Staff has already expressly stated to the Board that, because the issue has been raised by Mr. Sea, it is considering

---

[146] *See* Sea Amended Contentions at 4.

[147] *See National Enrichment Facility,* LBP-04-14, 60 NRC at 55.

[148] *See Georgia Tech,* LBP-95-6, 41 NRC at 305.

effects upon these resources.[149] This Board, as well, has been made aware of them. Thus, there are no remaining effects on the licensing review from the asserted omission and it does not therefore constitute an admissible contention. Under these circumstances, admitting this contention would undoubtedly lead to a curing amendment indicating that these resources had been considered (whether or not they were ''affected''), which thereupon would be appropriate for summary disposition. The net result of such a process would add no additional information, but would simply create unnecessary additional work for the parties and unnecessary delay — both of which the Commission has continuously encouraged licensing boards to avoid.[150]

Here, the Petitioner did not support his contention that historic or cultural resources would be affected by the proposed ACP. Further, even if the mere failure to identify these resources, without demonstrating any potential impact on them can serve as the basis for a contention, in this case any effects of such an omission have already been cured. The Staff is aware of these cultural and historic resources and is in the process of consideration and consultation specified by the NHPA. Accordingly, Sea Contention # 1.1 would be rejected for any or all of these reasons.

b. Sea Contention # 1.2

''USEC has failed to identify potential impacts of the American Centrifuge Plant on nearby historic and prehistoric sites.''

As his basis for this contention Mr. Sea presents a list of potential adverse impacts on historic and prehistoric sites from construction and operation of the ACP, but again does not offer any expert testimony or factual support (as required by 10 C.F.R. §§ 2.309(f)(v) and (vi)) indicating any adverse effect whatsoever.[151] Both USEC and the NRC Staff emphasize Mr. Sea's failure to provide facts or expert opinion to support this contention.[152]

---

[149] During the July 19, 2005 prehearing conference, the Staff articulated its understanding that it had an obligation to consider cultural and historic resources that were located off the DOE reservation and indicated that it was in the process of meeting that obligation. The Staff stated that it had already submitted a request for additional information to the Applicant to address the area of potential effects to include these off-reservation sites, and that the Staff intends to pursue an examination of those sites whether or not this contention is admitted. Tr. at 106-08.

[150] *See* 63 Fed. Reg. 41,872, 41,873 (Aug. 5, 1998) (''The Commission's regulations . . . provide licensing boards all powers necessary to regulate the course of proceedings, including the authority to set schedules, resolve discovery disputes, and take other action appropriate to avoid delay.'').

[151] *See* Sea Petition To Intervene at 22-23.

[152] USEC Answer to Sea Petition at 23-26; NRC Staff Response at 13-15.

In his Amended Contentions submitted electronically on August 17, 2005, Mr. Sea represents that in the early spring of 2005, the Southwest Access Road ''was . . . reopened, and its entrance was festooned with new security barriers, adorned with fluorescent orange decals, new gateposts painted fluorescent yellow, and new road markers in fluorescent orange.''[153] He further references a photograph that depicts the road as of August 14, 2005. First, we find that the photograph[154] is not as dramatic as Mr. Sea's description of the scene. Further, when Mr. Sea raised this issue during the Prehearing Conference on July 19, 2005,[155] he was repeatedly asked how the modifications to the road were related to the NRC's licensing of the proposed ACP. He did not offer a viable explanation to these queries during the Prehearing Conference, and did not answer these questions in his Amended Contentions. Further, at the Prehearing Conference, counsel for USEC explained that the changes to the recent Southwest Access Road were unrelated to the proposed ACP, and that, under USEC's proposal, the road would be closed.[156] Mr. Sea offered nothing to rebut USEC Counsel and offered nothing to indicate that the changes to the road are related to the proposed ACP. No portion of this contention is adequately supported by facts or expert opinion, and it does not raise a genuine dispute of material fact or law.

This contention is also inadmissible because it no longer presents a dispute that can affect the outcome of this proceeding.[157] Sea Contention # 1.2 is not admitted.

2. Compliance with Federal Historic Preservation Laws

a. Sea Contention # 2.1

''The USEC-DOE collaborative arrangement is out of compliance with the National Historic Preservation Act and related legislation.''

As USEC and the Staff accurately point out in their responses, the issue presented in this contention is beyond the scope of this proceeding, is premature, is not supported by material facts or expert opinion, and does not raise a genuine dispute with regard to the license application.[158]

The NHPA is a procedural statute designed to ensure consideration by federal agencies of the potential impact of their undertakings, including licensing deci-

---

[153] Sea Amended Contentions at 5.

[154] This photograph was submitted as Exhibit BB to Mr. Sea's Amended Contentions.

[155] Tr. at 72-73.

[156] *Id.* at 89-90.

[157] The Staff has advised that it will examine these particular resources, and, additionally, this Board has been made aware of them and may examine them in the context of the mandatory hearing on this application.

[158] USEC Answer to Sea Petition at 26-29; Staff Response at 15-18.

sions, upon historic properties. The NHPA requires agencies to inform interested persons and entities of the possible governmental action, and to consult with them to identify historic properties, assess the potential effects of the proposed action on these properties, and seek ways to avoid, minimize, or mitigate any adverse impact on the properties. Activities potentially covered by the NHPA include undertakings carried out by, or on behalf of, a federal agency and those activities, such as are presented here, requiring a federal license. 36 C.F.R. § 800.16(y).[159]

USEC has no obligations directly imposed upon it by NHPA. That statute is directed to federal agencies such as the NRC, not to license applicants. Thus, the requirement to identify cultural and historic resources are imposed upon license applicants, such as USEC, by 10 C.F.R. § 51.45(b), not by the NHPA. Section 51.45(b) requires that an applicant for a license to be issued by the NRC must describe the environment affected by its proposed action and must discuss the impact of the proposed action on that environment. Historic and cultural resources must be considered in this description of the environment affected.[160] Accordingly, a contention that focuses on deficiencies with regard to cultural and historic resources should include a discussion of section 51.45(b), as well as any perceived lack of compliance by the Applicant with those obligations. In this contention, Mr. Sea neither discusses, nor even mentions, this provision.

The NRC is required to complete the NHPA process of consideration and consultation prior to the issuance of any license. 16 U.S.C. § 470f, 36 C.F.R. § 800.1(c). Once the NRC completes the DEIS, potential intervenors will have a basis to evaluate whether historic and cultural resources have been adequately considered.

Upon review of the DEIS for the ACP, if an interested person concludes that the NRC has failed to meet its obligations, he may have a basis to submit a late-filed contention. At this time, however, this contention is not supported by any material fact or expert opinion and does not raise a genuine dispute with regard to USEC's LA. Accordingly, Sea Contention # 2.1 is not admitted.

---

[159] The NHPA requires that before a federal agency such as the NRC issues any license, it shall ''take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register.'' 16 U.S.C. § 470f. In addition, the NHPA requires that ''[t]he head of any such Federal agency shall afford the Advisory Council on Historic Preservation . . . a reasonable opportunity to comment . . . .'' *Id.* The regulations promulgated pursuant to the NHPA require even more. *See* 36 C.F.R. Part 800. *See also Atglen-Susquehanna Trail v. Surface Transportation Board,* 252 F.3d 246, 252-54 (3d Cir. 2001) for a clear, concise summary of the steps that a federal agency must take in order to comply with the NHPA.

[160] *See* 42 U.S.C. § 4331(b)(4). As noted above, in NUREG-1748, Environmental Review Guidance for Licensing Actions Associated with NMSS Programs (Aug. 2003), the NRC gives further guidance to license applicants regarding what they must include in the ER with regard to historic and cultural resources.

b. Sea Contention # 2.2

''Noncompliance with federal preservation law has undermined the legitimacy and legal basis of the USEC-DOE agreement.''

This contention is outside the scope of this proceeding, is not supported by fact or expert opinion, and does not identify any genuine dispute on any material issue of fact or law within the scope of this proceeding. In this contention Mr. Sea presents no material facts, instead making only bare allegations and presenting unsupported hypotheses. Petitioner opines that DOE's compliance status with NHPA ''will likely be determined by the Advisory Council on Historic Preservation [ACHP]'' but that the ''NRC should anticipate that outcome and either deny a license or send the applicant back into the process of negotiating its lease agreement with DOE . . . .''[161]

If the ACHP renders an opinion in this matter, the NRC will be required to react. At that time, if that activity occurs, as part of the mandatory hearing in this proceeding, the Board will consider whether the Agency's reaction complies with the law. However, there is nothing in Mr. Sea's discussion of this issue in his petition, or in any of his subsequent filings, that supports the admission of this contention.

In his Amended Contentions, Mr. Sea represents that the federally owned GCEP Water Field site may contain significant earthworks, and that the site has been leased from DOE by USEC.[162] Mr. Sea also represents that the lease agreement, which he identifies as Exhibit CC, incorporates a ''Regulatory Oversight Agreement (ROA) between DOE and USEC,'' which passes responsibility for NHPA compliance from DOE to USEC.[163] Mr. Sea then alleges that the DOE/USEC team have not met their NHPA obligations and, accordingly, that the NRC should deny USEC's license application.[164] DOE's activities, however, are entirely outside the purview of this Board, and Mr. Sea provides no legal analysis for the proposition that USEC somehow has assumed, or as a matter of law could assume, DOE's NHPA obligations, or that the activities of DOE are within our jurisdiction.

As noted above, before the NRC can grant the license requested by USEC, it must comply with the NHPA, and in the context of the mandatory hearing this Board is empowered to review the NRC's compliance with all of its obligations, including NHPA compliance. But this Board is not empowered to review DOE activity. Accordingly, even if the allegations made against DOE were true, it

---

[161] *See* Sea Petition To Intervene at 27.

[162] *See* Sea Amended Contentions at 6-7.

[163] *Id.* at 8.

[164] *See id.* at 11.

would be outside the scope of this proceeding. Sea Contention # 2.2 is thus not admissible.

3. Consideration of Action Alternatives

a. Sea Contention # 3.1

''USEC has failed to consider a broad range of alternatives to the proposed action.''

Petitioner notes that USEC only considers alternatives for USEC, and a ''no-action'' alternative.[165] He argues that the ER is deficient because it does not consider a full range of alternatives for the Piketon site, such as the building of a ''national monument — a pyramid — as a memorial to the passenger pigeon, which went extinct on this land'' or moving a ''part of Oak Ridge National Laboratory . . . to Piketon.''[166]

In response, USEC argues that this contention should be rejected because the Petitioner fails to identify any additional alternatives — beyond those already discussed in the ER — that are required to be addressed by NEPA.[167] The Staff echoes this argument, and asserts that this contention fails to raise a genuine dispute with regard to a material issue of law or fact.[168]

In its ER, an applicant is required to provide a discussion of alternatives to the proposed action that is sufficiently complete to aid the Commission in developing and exploring appropriate alternatives to the recommended course of action. 10 C.F.R. § 51.45(b)(3). However, in addition to a no-action alternative, only alternatives reasonably related to the goals of the proposed action, and the no-action alternative, need be considered.[169] The applicant is only required to consider feasible, nonspeculative alternatives,[170] and the range of alternatives need not extend beyond those reasonably related to the purposes or goals of the

---

[165] *See* Sea Petition to Intervene at 28.

[166] *Id.* at 30.

[167] USEC Answer to Sea Petition at 31.

[168] NRC Staff Response at 20.

[169] *See Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-93-3, 37 NRC 135, 144-45 (1993).

[170] *See City of Carmel-by-the-Sea v. Department of Transportation,* 123 F.3d 1142, 1155 (9th Cir. 1997); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 65 (1991).

proposed project.[171] The ER need not evaluate the effects of alternatives that are only remote or speculative possibilities.[172]

Petitioner Sea contends that there is a need to examine alternatives that are not in any way related to the purpose of the proposed project. Petitioner does not present any material facts or expert opinion in support of this contention. He offers no evidence that any of his speculative uses for the Piketon site might occur or that they are predictable consequences of a ''no-action'' alternative.[173] He does not demonstrate that there is a genuine dispute on any issue within the scope of this proceeding. Accordingly, Sea Contention # 3.1 is not admitted.

b. Sea Contention # 3.2

''USEC stated action alternatives should be seriously evaluated.''[174]

In this contention, Mr. Sea argues that USEC should be required to move the ACP to Paducah, Kentucky, because the cultural impacts there would be less severe than the impact in Piketon, Ohio.[175] USEC argues that this contention fails to identify a genuine issue of material fact or law because it provides no meaningful support for Sea's proposition that the ACP would have more impact at Piketon than at Paducah.[176] USEC additionally points out that the ER does consider Paducah as an alternative site, and Mr. Sea acknowledges this in his petition.[177] The NRC Staff opposes admission of this contention because, it asserts, the contention is not supported by an adequate factual or legal basis.[178]

We agree that this contention fails to identify any defect or deficiency in USEC's LA or the ER, is not supported by any relevant factual basis or expert opinion, and does not raise a genuine dispute on a material issue of fact or law. Sea Contention # 3.2 is not admissible.

---

[171] *See Citizens Against Burlington, Inc. v. Busey,* 938 F.2d 190, 195 (D.C. Cir. 1991); *Process Gas Consumers Group v. Department of Agriculture,* 694 F.2d 728, 769 (D.C. Cir. 1981).

[172] *See Natural Resources Defense Council, Inc. v. Morton,* 458 F.2d 827, 838 (D.C. Cir. 1972).

[173] In his amended contention, Mr. Sea notes that Colorado's senators have proposed to transfer Rocky Flats, which was formerly used as a manufacturing site for nuclear weapons, from DOE to the Department of the Interior. Mr. Sea then argues that if it can happen at Rocky Flats, it can happen at Piketon. *See* Sea Amended Contentions at 12. This wholly speculative possibility does not support the admission of this contention, and does not alter our analysis.

[174] This contention did not appear in the electronically filed version of Mr. Sea's petition to intervene, and thus is not properly before this Board. *See infra* pp. 592-93. Nevertheless, for the reasons discussed above, we considered the admissibility of this contention.

[175] *See* Sea Petition To Intervene at 31.

[176] *See* USEC Answer to Sea Petition at 33-34.

[177] *Id.* at 34.

[178] NRC Staff Response at 21.

4. Impacts on Surrounding Area

a. Sea Contention # 4.1

''USEC neglects many potential impacts of ACP on the local community.''

We interpret this contention to be an allegation that the ER submitted by USEC is deficient in that its discussion of the socioeconomic impact of the ACP on the local community is inadequate.[179] To the extent that this contention goes beyond that interpretation, it is beyond the scope of this proceeding. As for the possibility that this contention relates to such a deficiency, it does not point out any specific deficiency in the extensive discussion of the socioeconomic impact of the ACP that is set out in section 4.10 of the ER, and is wholly unsupported by fact or expert opinion. Accordingly, Sea Contention # 4.1 is not admitted.

5. Impacts on Site Cleanup and Community Reuse

a. Sea Contention # 5.1

''USEC fails to consider that ACP has resulted and will result in the relaxation of DOE cleanup standards at the site and reduce possibilities for community reuse of facilities.''

Petitioner suggests that ''[t]here is a sense in Piketon that DOE supports the USEC vision not just because it was congressionally mandated, but because new nuclear development will relieve DOE of its cleanup obligation . . . .''[180] Petitioner presents no facts or expert opinion in support of this contention, only bare allegations and speculation. In addition, as we stated above, this Board has no jurisdiction over DOE activities, which are not within the scope of this proceeding. Accordingly, Sea Contention # 5.1 is not admitted.

6. Nuclear Proliferation Considerations

a. Sea Contention # 6.1

''USEC has not accounted for the proliferation risks associated with centrifuge technology.''

In support of this contention Mr. Sea notes that ''[i]t certainly is an odd time to be pursuing an 'American Centrifuge' project'' because ''when '[t]he American Centrifuge' is announced . . . to the world, there will be a backlash . . . . Countries

---

[179] *See* Sea Petition To Intervene at 32.

[180] *Id.* at 33.

on the edge of reconsidering their compliance with the fraying Nonproliferation Treaty will teeter over the edge.''[181]

USEC and the NRC Staff both oppose the admission of this contention, on the grounds that nonproliferation issues exceed the scope of this proceeding.[182] The NRC Staff further notes that an attempt to impose broader requirements on an applicant than are required under the Commission's regulations is considered an indirect challenge to those regulations.[183]

This contention raises an issue that is beyond the scope of this proceeding and, accordingly, Sea Contention # 6.1 is not admitted.

7. Structure and Viability of USEC and of the USEC-DOE Relationship

a. Sea Contention # 7.1

''USEC has not clarified the company's stability or long-term prospects, or how its relationship with the Department of Energy is intended to function, or how that relationship might evolve over time.''

Mr. Sea asserts that ''USEC is an odd thing. It was created, not for the purpose of enriching uranium, but for the purpose of closing the old diffusion plants down, without liability attaching to any politician.''[184]

USEC asserts that the bases provided by Mr. Sea for this contention are irrelevant, and further, that the Petitioner neither provides supporting facts or expert opinion nor identifies a material issue of law or fact.[185] The NRC Staff notes that the conduct of DOE and its relationship to USEC's operations are beyond the scope of this proceeding.[186]

We fail to see the relevance of the matters presented in this contention to the instant proceeding. The bases present neither material fact nor expert opinion and do not support the admissibility of the contention.[187] In addition, the DOE/USEC relationship is beyond the scope of this proceeding. Sea Contention # 7.1 is not admitted.

---

[181] *Id.* at 34.

[182] *See* USEC Answer to Sea Petition at 37; NRC Staff Response at 26.

[183] NRC Staff Response at 26.

[184] Sea Petition To Intervene at 36.

[185] USEC Answer to Sea Petition at 38-39.

[186] NRC Staff Response at 27.

[187] In his Amended Contentions, Mr. Sea cites various sources to suggest that USEC's financial future is less than certain. *See* Sea Amended Contentions at 14. This information, however, does not support Sea Contention # 7.1, and does not provide any basis for the Board to alter its analysis of the admissibility of this contention.

III. ADDITIONAL MATTERS

Mr. Sea requested that Exhibits T and U to his original petition be kept under seal because they contain the names and personal information of individuals not involved in this proceeding.[188] Although the Board sees no reason why these documents should be kept confidential, we likewise see no harm to the other litigants in this proceeding, or to the public interest, that would be caused by granting Mr. Sea's request. Although we note that, absent a strong showing of good cause, it is the normal practice for documents filed as attachments to pleadings to be placed in the public record, in this instance we grant Mr. Sea's request to the following extent. We direct that Exhibits T and U be kept under seal. However, if he so desires, Mr. Sea may delete the names and personal information of individuals from copies of these exhibits, and enter them into the record as substitutes for Exhibits T-1 and U-1 to his original petition to intervene that would be placed in the public record.

IV. CONCLUSION

For the reasons set forth above, we find that neither PRESS nor Geoffrey Sea has submitted an admissible contention under 10 C.F.R. § 2.309(f). Accordingly, their petitions to intervene are denied. In accordance with the provisions of 10 C.F.R. § 2.311, any appeal to the Commission from this Memorandum and Order must be filed within ten (10) days after it is served.

[188] *See* Request for Privacy Protection by Geoffrey Sea (Mar. 30, 2005).

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD[189]

Lawrence G. McDade, Chairman
ADMINISTRATIVE JUDGE

Paul B. Abramson
ADMINISTRATIVE JUDGE

Richard E. Wardwell (by L.G. McDade)
ADMINISTRATIVE JUDGE

Rockville, Maryland
October 7, 2005

[189] Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for (1) Applicant USEC Inc.; (2) Intervenors Portsmouth/Piketon Residents for Environmental Safety and Security (PRESS) and Geoffrey Sea; and (3) the NRC Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Michael C. Farrar, Chairman
Dr. Peter S. Lam
Dr. Paul B. Abramson

In the Matter of **Docket No. 72-22-ISFSI**
(ASLBP No. 97-732-02-ISFSI)

PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage Installation) **October 28, 2005**

In this 10 C.F.R. Part 72 proceeding regarding the application of Private Fuel Storage, L.L.C., for a license to construct and operate an independent spent fuel storage installation on the reservation of the Skull Valley Band of Goshute Indians, the Licensing Board rules, by split decision, in favor of the Applicant, rejecting the State of Utah's assertion that there is too high a probability of a radiation-releasing breach of a spent nuclear fuel canister as a result of an accidental aircraft crash.

TECHNICAL ISSUE(S) DISCUSSED: RISK ANALYSIS

Risk consists of both probability and consequences factors. For simplicity it is often sufficient to focus on only one of those elements: if the consequences of an accident are shown to be insignificant, no attention need be paid to the actual probability of that accident, for it does not matter if it occurs. Conversely, if the probability of an accident is sufficiently low, the consequences need not be examined, for even if they be assumed to be excessive, they need not be guarded against.

LICENSING BOARD(S): SCOPE OF REVIEW

ATOMIC ENERGY ACT: SCOPE OF INFORMATION REQUESTED FOR LICENSING (AIRCRAFT CRASHES)

In accordance with longstanding Commission precedent, Board hearings are not the place to consider deliberate terrorist-type attacks; the scope of the hearing involves only the threat posed by accidental crashes, not deliberate ones. *See Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 851 (1973). This position was renewed after the events of September 11, 2001. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-03-4, 57 NRC 69, 78 n.4 (2003) (discussing *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340 (2002)).

LICENSING BOARD(S): SCOPE OF REVIEW

Protection of nuclear facilities against terrorism is undertaken by the Commission itself — outside the hearing process — in conjunction with other federal agencies, civilian and military.

TECHNICAL ISSUE(S) DISCUSSED: RISK ANALYSIS

ATOMIC ENERGY ACT: SCOPE OF INFORMATION REQUESTED FOR LICENSING (AIRCRAFT CRASHES)

At issue before the Board is the limited safety question of whether, in a crash situation, the canister will maintain its integrity as a radiation boundary, and not whether the canister, when subjected to a lesser crash impact causing no radiation release, will keep the spent fuel bundles from sustaining any damage. The latter type of incidents are not at issue before the Board because under the regulatory system, such non-radiation-releasing incidents are to be dealt with by a licensee if and when they occur.

LICENSING BOARD(S): SCOPE OF REVIEW

It is not the Board's role to determine the optimum method by which the Nation should manage spent nuclear fuel. Rather, the Board's role is only to pass judgment on the safety and environmental challenges to an applicant's particular proposal. The Commission has indicated, *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-4, 59 NRC 31, 40 (2004), that determining the wisest course of action for the country in terms of managing spent nuclear fuel borders on a ''political'' question (i.e., a policy choice about competing societal values) for elected and appointed representatives to resolve.

As such, it is a question that the Commission ''do[es] not believe that NEPA charges . . . [a] Board, in its hearing process, with answering.'' *Id.*

LICENSING BOARD(S): SCOPE OF REVIEW; JURISDICTION

To the extent antiterrorism concerns are raised, that debate is even more expressly outside Board jurisdiction, reserved to the Commission for consideration outside the adjudicatory process.

LICENSING BOARD(S): DISCRETION IN MANAGING PROCEEDINGS

Boards should make it a paramount concern to accord intervenors and other parties the fundamental right of fair treatment. *See Skull Valley Band of Goshute Indians v. Nielson,* 376 F.3d 1253, 1254 (10th Cir. 2004).

LICENSING BOARD(S): CONSIDERATION OF NRC STAFF EVIDENCE

NUCLEAR REGULATORY COMMISSION: ADJUDICATORY RESPONSIBILITIES

While the NRC Staff's regulatory review plays an important role in the application and hearing process, Boards insist upon treating the Staff — with whom boards have no extrajudicial organizational interaction — the same as any other party at the hearing. In particular, boards subject the Staff's evidence to the same scrutiny as that of the other parties. *See Private Fuel Storage*, LBP-03-4, 57 NRC at 140 n.124 and accompanying text.

LICENSING BOARD(S): RESPONSIBILITIES (ASSESSMENT OF RISKS; DEVELOPMENT OF RECORD)

NUCLEAR REGULATORY COMMISSION: AUTHORITY

The agency's regulatory review process, including requests for additional information, helps an applicant to enhance its proposal from a safety standpoint, and to develop a better information base to demonstrate its safety. Although resulting amendments to an application, as well as any corresponding contentions filed by petitioners, take some time to resolve, facility design and operation are both made safer as a result.

LICENSING BOARD(S): EXPEDITION AND THOROUGHNESS; DISCRETION IN MANAGING PROCEEDINGS

NUCLEAR REGULATORY COMMISSION: AUTHORITY

The time consumed by an applicant's interaction with the NRC Staff in refining an application cannot necessarily be attributed to the adjudicatory process or to the board's oversight of that process, especially because boards have no supervisory power over the Staff's performance of its regulatory review activities. *See Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-6, 59 NRC 62, 74 (2004) (citing, e.g., *Curators of the University of Missouri* (TRUMP-S Project), CLI-95-1, 41 NRC 71, 121 (1995)).

LICENSING BOARD(S): EXPEDITION AND THOROUGHNESS; RESPONSIBILITIES (DEVELOPMENT OF RECORD); DISCRETION IN MANAGING PROCEEDINGS

NUCLEAR REGULATORY COMMISSION: ADJUDICATORY RESPONSIBILITIES

The schedule for the adjudicatory process is not wholly — and sometimes not even largely — within the board's management and control. Often, a significant portion of the time is consumed by the interaction between an applicant and the NRC Staff, as the applicant polishes the application and its supporting data to enable the Staff to accept its approach and conclusions.

ORDER

(Issuing Redacted Version of Final Partial Initial Decision)

Our Final Partial Initial Decision in this proceeding, resolving the accidental aircraft crash ''consequences'' issue, was originally issued on February 24 of this year. Because our discussion therein involved Safeguards-protected matters, that decision was issued in two formats: one available to the public, and the other (the ''official'' one) available only to the litigating parties and to any reviewing tribunals. The publicly available version differed from the nonpublic version in that the public Part II contained *only a thirteen-page non-Safeguards summary or paraphrase* of the Board majority's reasoning on the crucial issues, *rather than the full technical analysis,* including Safeguards information, detailed in the forty-three pages of the nonpublic version of Part II. All other portions of the two versions, including the dissent, were identical.

We indicated at that time (*see* Feb. 24 cover Memorandum at 2; Decision at C-6) that we were retaining jurisdiction to attempt to issue later a redacted

decision that would make as much of our reasoning, other than its Safeguards aspects, available to the public. Following issuance of the Commission's final decision on the matter (CLI-05-19, 62 NRC 403 (2005)), the parties agreed on the Safeguards redactions (involving all or part of only some thirty-four lines) necessary to allow our earlier decision to be released publicly. The Board's own NRC Safeguards expert, who had advised us as to those aspects of our earlier decisions, concurred.

Accordingly, the redacted Decision attached hereto, consisting of (1) the previously publicly available portions — i.e., the opening ''Overview and Summary,'' the Part I ''Procedural and Substantive Background,'' the Part III ''Conclusions of Law and Conclusion of the Proceeding,'' the dissent, and the Appendix[1] — and (2) the newly available Safeguards-redacted forty-three-page Part II ''The Merits,''[2] will be PUBLISHED physically, under this date and preceded by this Order, in the bound volumes of the periodic *Nuclear Regulatory Commission Issuances.*[3] The redacted Decision will also be PROVIDED electronically in the agency's ADAMS system for public viewing and reference.

The Decision may be cited as ''LBP-05-29, 62 NRC 642 (February 24 [as redacted October 28], 2005).'' The previously issued unofficial, public version of our Decision, with its thirteen-page non-Safeguards paraphrase or summary of Part II, will remain available on ADAMS for reference purposes (accession # ML050620391).[4]

---

[1] In reissuing those portions, we have (1) made minor, nonsubstantive typographical or syntactical corrections thereto, and (2) conformed the description therein of the handling of the different versions of Part II to the present circumstances.

[2] The now-available redacted Part II is essentially identical to the original Safeguards-protected Part II, except for (1) some unavoidable minor, noncumulative changes in page or line breaks; (2) the redactions themselves, as indicated by a series of **x x x x x**'s occupying approximately the same typographical space as the text removed; (3) the change of several incorrect ''Section A'' references to refer instead to ''Part I''; (4) the correction in footnote 125 of the ''note 75'' reference to refer instead to ''note 124''; and (5) typographical corrections.

[3] In this regard, because it did not contain Safeguards information, our May 24 decision on reconsideration has already been published (*see* LBP-05-12, 61 NRC 319 (2005)). As noted in the text (p. 639, above), the Commission's September 9 final decision on the matter is likewise being published.

[4] Owing to the nature of a characterization contained therein, the Board finds it appropriate to comment upon an aspect of the NRC Staff's September 28, 2005 ''Motion for Directed Certification and Stay of the Licensing Board's [September 15] 'Order Regarding Redaction of Final Partial Initial Decision.' '' Therein, the Staff argued to the Commission, *inter alia,* that (1) the Board lacked authority to conduct redaction; (2) the Board had created a ''balancing'' test that could compromise the protection of Safeguards information, and the nation's common defense and security, in favor of the public's interest in viewing aspects of our decision; and (3) the redaction process would be so complex as to cause substantial further delay in the proceeding.

(Continued)

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Michael C. Farrar, Chairman
ADMINISTRATIVE JUDGE

Peter S. Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland
October 28, 2005

Copies of the foregoing documents were sent this date by Internet e-mail transmission to counsel for (1) Applicant PFS, (2) Intervenor State of Utah, and (3) the NRC Staff.

As to ground # 3, above, the redaction process proved simple and rapid, leading the Commission to dismiss the Staff's pleading as moot. CLI-05-22, 62 NRC 542 (2005). As is customary, the Commission went on therein to vacate our redaction order (to eliminate ''any confusion or future effects stemming from unreviewed Board decisions''), while recognizing that our redacted decision was ''now ready for publication.'' 62 NRC at 544.

The matter could rest there but for the Staff characterization of the Board's action reflected in ground # 2, above, which could lead to a misunderstanding about the Board's intentions in terms of protecting Safeguards information. So that the record is clear as to what we actually did, we simply note that, in facing the possible need to determine what redactions should be made (as the Commission has now confirmed we should do with the assistance of our appointed adjudicatory employee (62 NRC at 545; *compare* p. 639, above)), we never considered that we should — and cannot fathom what in the record led the Staff to believe that we might — ''balance'' the protection of Safeguards information, and of national security interests, against the opportunity for the public to see more of our reasoning. *See* Sept. 28 Staff Motion at, *e.g.,* 3. *We neither used the word nor envisioned the concept.* Indeed, we said essentially the opposite: *see* Sept. 15 Order at 4, urging ''the parties'' not to ''over-reach'' regarding *their* respective positions, for while ''on the one hand, *security interests will demand that certain material be protected, . . . excessive* protection will deprive the citizens of Utah and the nation of the opportunity to understand more fully what underlies the agency's decision on this important issue'' (emphasis added). The point is this: a desire to avoid *excessive* protection does not equate to, or include the suggestion of, a willingness to trade *required* protection for other values.

For litigants' future guidance on a related point, we remind them that, as far as we know, when disputes have arisen as to the extent of disclosure of material claimed to be protected, all previous boards have done as we would have done here, that is, stayed, on the Board's own volition, the actual release of any contested document pending Commission review of any Board ruling that *rejects* a withholding claim. Requests for extraordinary remedies would not, then, be expected to be required in order for a party to protect its interest in nondisclosure.

Separate Opinion of Judge Abramson:

I *concur* in the issuance of the redacted Board decision and endorse the process adopted by the Board's Chairman in causing its preparation, but see no need for, or merit in, addressing in this Order the matters covered in note 4, and to that extent I *dissent.*

ATTACHMENT

REDACTED VERSION FOR PUBLICATION OF LICENSING BOARD'S FEBRUARY 24, 2005 ''FINAL PARTIAL INITIAL DECISION'' ON F-16 AIRCRAFT ACCIDENT CONSEQUENCES

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Michael C. Farrar, Chairman
Dr. Peter S. Lam
Dr. Paul B. Abramson

In the Matter of	**Docket No. 72-22-ISFSI (ASLBP No. 97-732-02-ISFSI)**
PRIVATE FUEL STORAGE, L.L.C. (Independent Spent Fuel Storage Installation)	**February 24, 2005 (as redacted October 28, 2005)**

FINAL PARTIAL INITIAL DECISION — Redacted Version for Publication[1] (Regarding F-16 Aircraft Accident Consequences)

Overview and Summary

Over the last several years, this Board has resolved a large number of wide-ranging issues regarding the application of a nuclear utility consortium known as Private Fuel Storage to construct and to operate — on a Goshute Indian

[1] Initially, two versions of this Decision were issued: (1) the official one, which contained ''Safeguards'' information and thus could not be released to the public; and (2) an unofficial one, containing no Safeguards information and thus available to the public. The differences between their respective contents are explained herein and in the Public Version's cover Memorandum.

Reservation in Skull Valley, Utah, 50 miles southwest of Salt Lake City — an aboveground facility for the temporary storage of spent fuel from the nation's nuclear reactors. If created as planned, that facility would consist of an array of 500 concrete pads, each 67 feet by 30 feet, on which would sit 4000 cylindrical storage casks, each nearly 20 feet in height and 11 feet in diameter. Each carbon-steel-encased concrete cask would hold a stainless steel canister housing spent fuel rods.

The only question remaining before us was raised by the State of Utah and concerns the risk to those casks and their contents presented by an accidental crash of one of the some 7000 flights of F-16 military jets that head down Skull Valley each year. *By a 2-1 vote (Judge Lam dissenting), we resolve that question in favor of the Applicant* (whose position the NRC Staff supported). Issuance of the requested license is now for the Commission to consider (*see* p. 648, below, note 14 and accompanying text). In the rest of this introduction, we provide a brief summary of the facts and an overview of the reasoning underlying our decision.[2]

1. Spent Fuel Logistics

Each of the 4000 casks described above would be comprised of an ''overpack'' — consisting in part of over 2 feet of concrete sandwiched between carbon steel shells (a 3/4-inch-thick outer shell, and an inner shell with attached liner totaling 2 inches) — housing and protecting a 1/2-inch-thick stainless steel ''multipurpose canister'' (MPC) resting inside it. The MPCs would have been loaded with spent nuclear fuel at different reactors around the country, welded shut, and moved to the site by rail (*see* p. 653, below) in a government-approved transportation cask, at an average rate of about four a week for 20 years.

The railcars would be offloaded at the facility's proposed Canister Transfer Building (CTB), with each MPC being shifted (unopened) from the *transportation* cask in which it arrived into one of the *storage* casks that will have been fabricated onsite. After being loaded with an MPC, each cask would be straddled and lifted by a massive, heavy-haul dual-tracked transporter vehicle that would move the cask to a position on one of the concrete pads.

---

[2] Because this is the last decision we will issue in the proceeding, and it may lead to license issuance, we believe it appropriate — for the benefit of reviewing tribunals as well as of those interested in how the agency conducts its business — to devote considerable attention herein to the procedural and substantive history of the issue before us, given its significance to the people of Utah and the Nation (*see* the agency's Strategic Plan, NUREG-1614, Vol. 3, Part III (''Openness'') (Aug. 2004), stressing the importance of effective outreach and communication as an adjunct to the agency's technical oversight of nuclear reactor and materials safety). In addition, all three Board members join in appending hereto information about the history of the proceeding which should be useful to various readers (*see* Appendix, pp. 706-14).

2. Previous Aircraft Crash Decision

Nearly 2 years ago, we issued a Partial Initial Decision[3] on an earlier phase of this major safety issue raised by the State, which had intervened in the proceeding as part of its opposition to the PFS application for an NRC license.[4] This safety issue, one of many presented to us by the State and now the last one pending, concerned the potential risk that accidental military jet crashes could damage the facility and thereby cause the release of radioactivity from the spent fuel rods held in the MPC.

The concern about such accidental crashes arose because pilots from Hill Air Force Base, northeast of Salt Lake City, annually make some 7000 relatively routine flights down Skull Valley in F-16 single-engine fighter jets on their way to conducting intensive training maneuvers in the Utah Test and Training Range, located over the State's West Desert. Our earlier decision, following a lengthy evidentiary hearing, was that the *probability* of an accidental F-16 crash into the Applicant's proposed Skull Valley *site* was over four times too high to permit facility licensing (*see* Section 3, below) unless the potential *consequences* of such an accident were to be addressed in some fashion, such as by demonstrating their lack of significance or by guarding against them.[5]

3. ''Credible Accident'' Concept

The above-mentioned ''probability'' and ''consequences'' concepts come into play because nuclear facilities, such as power plants or spent fuel storage sites, must be designed to withstand all accidental events that are sufficiently likely to occur (while causing radiation releases in excess of specified limits) as to be deemed ''credible'' threats. Under the regulatory standard applicable here (*see* p. 656, below), if the probability of such a radiation release from an accidental crash of one of the F-16s is less than one in a million per year, such crashes need not be considered in designing the facility (in NRC parlance, are not ''credible accidents'') and therefore do not pose a barrier to licensing the facility.

---

[3] LBP-03-4, 57 NRC 69 (2003).

[4] The State's broadscale and enduring opposition to the PFS proposal has been manifested here and in other forums. In that regard, the United States Court of Appeals for the Tenth Circuit recently affirmed a federal District Court's invalidation of certain State statutes designed to block the facility. *See Skull Valley Band of Goshute Indians v. Nielson,* 376 F.3d 1223 (Aug. 4, 2004), *affirming Skull Valley Band of Goshute Indians v. Leavitt,* 215 F. Supp. 2d 1232 (D. Utah 2002), *petition for cert. sub nom. Nielson v. Private Fuel Storage,* No. 04-575 (*filed* Oct. 28, 2004). *See also Bullcreek v. NRC,* 359 F.3d 536 (D.C. Cir. 2004) (rejecting the State's theory that the NRC lacks authority to license a privately owned away-from-reactor spent fuel storage facility).

[5] *See* LBP-03-4, 57 NRC at 77-78, 135. That first phase of the aircraft crash issue became known colloquially as the ''probability'' phase, and the current, second phase as the ''consequences'' phase. As will be seen, those categorizations turned out to be not fully descriptive. *See* p. 646, below.

The first portion of our proceeding addressed only the preliminary question of the probability of an accidental crash of an F-16 into the *site,*[6] for if that probability had proven to be *less than one* in a million, the Applicant would have prevailed without having to present further analysis. With the evidence showing that probability to be *over four* in a million per year, however, this second portion has focused upon a more refined question: whether there is a probability greater than one in a million per year that an accidental crash of an F-16 would have the consequence of *breaching a canister and thereby causing a release of radiation.*[7] For if not, the facility would need not be designed to withstand such an accidental crash and would not on that ground be denied a license.

4. Recent Aircraft Crash Hearing

In the aftermath of our first F-16 crash decision, and of the Commission's declining to review it at that juncture (CLI-03-5, 57 NRC 279 (2003)), the Applicant attempted to show, at a 16-day evidentiary hearing before us in late summer, 2004,[8] that its storage casks were already designed robustly enough to alleviate the crash concern.[9] More specifically, the Applicant — pointing to (1)

---

[6] For purposes of determining that probability, a standard formula was employed (*see* p. 659, below). *See generally* LBP-03-4, 57 NRC at 87-88, 114-22.

[7] As will be seen, the Applicant chose not to attempt to demonstrate that a radiation release, if it occurred, would not cause doses *in excess of applicable limits* (*see* pp. 661-62, below). Rather, it chose to hold itself to a more stringent test by attempting to establish that no radiation release *whatsoever* would result from any accidental crash deemed credible. *See* p. 661, below.

[8] As adverted to in note 1, above, and in the cover memorandum to the Public Version of this Decision, that hearing had to be closed to the public to protect from disclosure certain information — referred to as ''Safeguards'' because it involves safeguarding nuclear materials — relating to analyses of cask characteristics, and the impact of aircraft crashes thereon, that could be of interest to potential terrorists. For similar reasons, the public will be able to review only the conceptual framework, not the detailed analysis, that supports our decision (*see* p. 649, below). Our detailed factfinding and reasoning — related to the extent, or lack thereof, of structural damage caused by aircraft impacts at particular speeds — must be withheld from the public.

We would, however, point out to residents of Utah, and to other interested persons, that counsel from the State Attorney General's office participated fully in opposing the facility during the hearing. Counsel had the opportunity to challenge all the evidence in favor of the project and to present evidence on behalf of those opposed to it. Those same State counsel will now be in position to scrutinize, and if desired to challenge, our full decision. In that regard, that full decision, including the nonpublic versions being served on the parties today, will be available to any reviewing tribunals (*see* note 15, below).

[9] At one point, the Applicant sought approval to begin building an interim, smaller facility. That plan involved storing a reduced number of casks (336 instead of 4000), thus taking up less space and presenting a smaller ''target'' area (*see* p. 655, below), and arguably reducing the probability of a military jet crash to acceptable levels. The Applicant did not pursue that interim step after we initially

(Continued)

the structure of the proposed storage casks and (2) the pattern of the actual F-16 crashes that have occurred worldwide — urged that, even if an F-16 did crash into the *site,* such a crash was so unlikely to cause *cask and canister* damage resulting in radiological release that, under the ''less than one-in-a-million'' probability standard, the residual risk was an acceptable one to take.

Before the hearing began, the Applicant chose *not* to present evidence on possible radiological *consequences* from a *breached* canister, but to focus instead just on the *probability* that there would be *no such breach.* Accordingly, it could be said that this second phase of our hearing dealt not with classic accident ''consequences'' in a radiological release sense but with a consequences-oriented refinement, focusing on canister damage, of the initial site-related ''probability'' analysis. *See* p. 661, below; LBP-03-4, 57 NRC at 78; and CLI-03-5, 57 NRC at 283-84. *But see* LBP-03-4, 57 NRC at 136 n.110, anticipating just such a segmentation of the issues.

Just as vigorously as the Applicant presented its position that the probability of a consequential breach-causing crash was *low enough* to be ignored, the State urged the opposite, through witness testimony and documentary evidence of its own indicating that the probability was *too high.*[10] The NRC Staff — having, as part of its regulatory function, put a lengthy, time-consuming series of questions to the Applicant before the hearing — came to the hearing essentially supporting the Applicant's position.

5. Today's Split Board Decision[11]

Upon review of all the evidence, Judges Farrar and Abramson find themselves essentially in agreement with the Applicant and NRC Staff on the key issues before

---

rejected it on procedural grounds. *See* May 29, 2003 Tr. at 13,729-855 (oral argument), 13,857-59 (Board ruling); *see also* Tr. at 13,859-75 (anticipating possible further proceedings).

[10] With ''risk'' being made up of both probability and consequences factors, for simplicity it is often sufficient to focus on only one of those elements. Thus, if the consequences of an accident are shown to be not significant, no attention need be paid to the actual probability of that accident, for it does not matter if it occurs. Conversely, if the probability of an accident is sufficiently low, the consequences need not be examined, for even if they be assumed to be excessive, they need not be guarded against. (*See* the NRC Staff explanation preceding the opening of the Salt Lake City hearings (April 8, 2002 Tr. at 2997-99); our LBP-03-4 discussion (57 NRC at 138); and the Commission's explanation in an opinion herein, 57 NRC at 283-84.)

[11] In May 2003, the Commission expressed its belief that we should be able to issue today's decision by the end of that calendar year, i.e., nearly 14 months ago. *See* 57 NRC at 284-85. Much of the extra time, whose causes we reported to the Commission at each stage, was taken by the Staff's pursuit of additional questions in performing its prehearing regulatory review, and the Applicant's need for additional time to respond to those questions. In any event, all three Board members

(Continued)

us. As that majority of the Board sees it, the evidence — including analytical and experimental data, and computer simulations based thereon — establishes, based on the properties and shape of the concrete and steel ''overpack'' cask and of the stainless steel internal canister, that an F-16 crashing at or below a *particular rate of speed and angle of impact* (the ''bounding impact,'' which is nonpublic Safeguards Information) would not damage a canister. Further, the nature of F-16 flights down Skull Valley, and the data that can be gleaned from the reports of prior F-16 crashes worldwide in circumstances akin to Skull Valley operations, reveals that there is over an 80% likelihood that the accidental crash of an F-16 into the *site* would be at a *less severe speed and angle* than the bounding impact and thus not damage a canister.

As a result, by virtue of the refined analysis presented by the Applicant and NRC Staff during the most recent hearings, the previously determined *over four* in a million per year likelihood of a *crash into the site* (a relatively unsophisticated inquiry) has now been superseded by a more detailed inquiry. The latest analysis establishes that the likelihood of a *crash causing a canister breach* is somewhat *less than one* in a million per year.

Although the calculated probability seems to pass the applicable standard only marginally, the Board majority goes on to point out that there are at least four factors, not considered *quantitatively* in determining the probability, that can be seen *qualitatively* as serving to reduce that probability to an appreciable degree. These conservatisms involve: (1) the likelihood that, rather than being a ''direct hit'' causing the greatest damage, a crash could be off center, a factor not considered in the evidentiary calculations; (2) the likely damage to an aircraft, and the reduction of its destructive force, that would occur if the plane hit short of the casks and skidded into them, a possibility that was analyzed at trial as though the crashing plane would continue unimpeded by its skid; (3) the possibility that before ejecting a pilot would attempt to direct the aircraft away from the site, a factor that — although we declined to give the Applicant the ''almost certain'' credit for it being sought at the prior hearing — has some support in the prior opinion testimony and anecdotal evidence and could thus justify some (albeit much smaller) credit; and (4) the possibility that the ''bounding impact,'' below which canister breach was demonstrated *not* to occur, might upon further analysis be found to be slightly higher and thus move more crash scenarios into the ''no-breach'' category.

---

summarize in the Appendix our thoughts about the time consumed by this phase of the proceeding, both to complete the report the Commission expected, and to pass along our view that: (1) the extra time the parties took contributed much to the thoroughness and completeness of our evidentiary record; and (2) the course of this proceeding may be instructive in shaping expectations for future, similarly complex proceedings, especially in illustrating how *large portions of time are outside Board control.*

These additional conservatisms make the Board majority more comfortable with the degree to which the proposal meets the Commission's standards than it would be without them. On the other hand, Judge Lam's dissenting view is that there are too many areas — including the historic crash data, the expansive regression analysis, the curve-fitting methods, and the stainless steel behavior in the plastic range — in which gaps in scientific and technical knowledge undercut the degree to which reliance can be placed on the evidence and the analyses. In his dissenting opinion, he explains why he is thus unwilling to credit the Applicant's and Staff's case sufficiently to approve the project.

6. PFS License Authorization Process

With our decision herein denying the State's assertions on the military aircraft accident issue, all the contentions raised by project opponents have now been considered by the Licensing Board[12] and resolved in the Applicant's favor in one fashion or another.[13] Thus, under agency rules governing facilities of this nature, it is now up to the Commission to determine whether to authorize the NRC Staff to issue the requested license.[14] Our decision is subject to review by the Commission and by higher tribunals.[15]

We build upon the foregoing Overview in Part I, below (pp. 649-53) (Part I contains no Safeguards-related information and will thus be identical in each version of this Decision). There we set out the procedural and substantive background that frames the parties' dispute.

In Part II, we provide our analysis of the evidence and explain how we arrived at the findings and reasoning outlined conceptually in this Overview. That

---

[12] As will be detailed, the changing membership of the Licensing Board over the course of the proceeding has not affected our continuity of function.

[13] *See* LBP-03-4, 57 NRC at 84. Only now, with our rulings at an end, would some of our earlier rulings have ordinarily become appealable. But the Commission anticipated the need to conserve time when we eventually reached this juncture and previously called upon the parties to file their petitions for review of earlier Board rulings some time ago, rather than await today's completion of Board involvement. CLI-03-16, 58 NRC 360 (2003). The Commission has since addressed, and rejected, those asserted claims of error in our prior interlocutory rulings. *See* CLI-04-4, 59 NRC 31 (2004); and CLI-04-22, 60 NRC 125 (2004). *See also* CLI-03-8, 58 NRC 11 (2003) (affirming our earlier partial initial decision on seismic issues); CLI-04-16, 59 NRC 355 (2004) (addressing an earlier decision on financial issues).

[14] *See* p. 696, below, citing 10 C.F.R. § 2.764(c); *compare id.* § 2.764(a)-(b).

[15] Our ''Initial Decisions'' are, as that term implies, not this agency's last word — our rulings are subject to review by the five Commissioners who head the NRC and make the final decisions on behalf of the agency. Commission decisions are in turn reviewable by a federal Court of Appeals and may thereafter be considered by the Supreme Court of the United States.

discussion of the merits of the issue focuses on the three major subissues in the case: evaluating the strength of the cask structures; characterizing the historic F-16 crashes; and determining the uppermost probability that a crash into the site would have radiological consequences. (Because Part II is where ''Safeguards'' information appears, the *Public Version* of this Decision contains only a brief, general, non-Safeguards summary, with pages numbered from B-1 to B-13. The complete reasoning in the *Safeguards Version,* available only to the parties and to reviewing tribunals, has pages numbered from B-1 to B-43.[16])

Based on the Part II analysis, we are able in Part III (pp. 695-700) to bring matters to a conclusion (Part III, like Part I, contains no Safeguards-related information and is identical in both versions). We there recite briefly our formal Conclusions of Law and our Order and add our closing thoughts.

Judge Lam's dissent appears after our Decision. It was framed to avoid inclusion of Safeguards-related information, and thus its pages are numbered D-1 to D-7 (pp. 701-05) in each version.

After that dissent, we present in an Appendix some ancient and some recent history about the case. The former relates primarily to other issues that were raised, and to certain principles that govern our proceedings, and is offered for the benefit of those who may not be familiar with those matters. The latter, intended to complete the report expected by the Commission (*see* note 11, above), indicates what occurred, and what was accomplished, in the time consumed since our first aircraft crash decision.

I. PROCEDURAL AND SUBSTANTIVE BACKGROUND

In this part of our Decision, for completeness but at the risk of repeating some of what appeared in the opening summary, we first review the procedural history of the litigation over the PFS application, with particular emphasis on the ''credible accidents'' contention now being decided on its merits. We next

---

[16] In our previous decisions herein, we included both a ''Narrative'' section addressing the crucial questions presented by way of an opinion, and another section that presented the more traditional and detailed ''Findings of Fact.'' While this had the virtue of thoroughness, it did so at some cost in terms of both preparation time and overlapping rationales. Accordingly, we began discussing with the parties some time ago a different approach intended to shorten our decision-writing tasks at this juncture. *See* Tr. at 13,912, referred to in our unpublished September 9, 2003, ''Scheduling Order and Report,'' at 7 n.10.

Although no specific resolution was agreed upon then, our decision herein is constructed differently from the earlier ones. We still employ a narrative format to explain the reasoning which leads us to the key determinations that drive our decision, but that narrative reflects only those findings that are relevant to the matters in issue, while omitting recitations of background or noncontroversial facts upon which all parties agree or which are not necessary for comprehension of the reasoning supporting our Decision.

provide certain fundamental background information about the tangible aspects of the case: the Skull Valley geographic setting, the Air Force's training operations, and the Applicant's facility design. We then go on to recap the accidental aircraft crash decisionmaking process, including the manner in which our ''probability'' decision of 2 years ago, and the information-gathering since then, shaped the substance and timing of today's ''consequences'' decision.

A. Procedural History

The Applicant's proposal was noticed for hearing on July 31, 1997.[17] The State of Utah, along with a number of other parties, responded by requesting a hearing; eventually, those parties filed some 125 contentions challenging the proposed facility for various safety or environmental reasons.[18] On September 19, 1997, a Licensing Board was established to rule on petitions for hearing and for leave to intervene, and to preside over any adjudicatory proceedings that might be held in connection with the license application.[19]

The Board granted the State of Utah's request for a hearing, along with that of several other parties, and ruled that a number of contentions, in whole or in part, satisfied the Commission's requirements for admission as contested issues in this proceeding.[20] Other contentions were raised and ruled upon from time to time thereafter, to which we need not pause to provide references. The last State contention arose very recently, in mid-November of last year; our ruling explaining why it did not warrant further consideration was issued earlier today. *See* LBP-05-5, 61 NRC 108 (2005).

All but one of the contentions originally or later admitted have since been resolved through legal rulings, evidentiary decisions, or settlement agreements, leaving before the Board only the State's ''credible accidents'' Contention Utah K (its derivation is recounted at pp. 652-53, below). Of the 45 days of evidentiary hearings in 2002, a good portion was spent on what turned out to be the first phase of Contention Utah K. Our decision on those matters, issued March 10,

---

[17] *See* 62 Fed. Reg. 41,099 (1997).

[18] *See* LBP-98-7, 47 NRC 142, *reconsideration granted in part and denied in part on other grounds,* LBP-98-10, 47 NRC 288, *aff'd on other grounds,* CLI-98-13, 48 NRC 26 (1998).

[19] 62 Fed. Reg. 49,263 (1997). The Licensing Board was reconstituted three times during the course of the proceeding. Early on, Judge Murphy was replaced by Judge Lam. Later, a second Board was created with Judge Farrar as Chairman, but with the original Board, chaired by Judge Bollwerk, retaining jurisdiction over certain pending matters. Last year, Judge Kline was replaced by Judge Abramson on the Farrar-chaired Board. *See* 62 Fed. Reg. 52,364 (1997), 66 Fed. Reg. 67,335 (2001), and 69 Fed. Reg. 5374 (2004).

[20] *See* LBP-99-7, 47 NRC at 247-49.

2003, eventually led to the second phase of the hearing, which began on August 9, 2004, and finished on September 15, 2004.

Owing to the sensitive information involved, the second hearing had to be closed to the public. That factor, along with the relative ease and assurance of document safeguarding at our DC-area headquarters location (as opposed to space obtained elsewhere), dictated that the closed hearing be held in our courtroom in Rockville, Maryland.[21]

Speeded somewhat by some novel techniques we employed (*see* App. at p. 713 nn.17-20, below), the hearing took 16 days, during which we heard testimony from 18 witness panels, composed of various combinations of 20 different expert witnesses, who among them sponsored some 225 exhibits. That all generated some 4500 transcript pages of live exchanges, in addition to some 600 pages of prefiled direct and rebuttal testimony that was, as is typical, bound into the record as if read.

The parties then submitted their two sets of post-trial briefs, in the form of opening and reply ''Proposed Findings of Fact and Conclusions of Law'' totaling over 900 pages. The last of those briefs was filed on November 19, 2004, and was thought to trigger the formal period for preparation of our decision.[22]

Upon examination of those briefs, however, we believed that an assertion by the State in its reply brief concerning an alleged serious deficiency in the NRC Staff position needed further exploration. Having heard nothing from the Staff, on December 1, 2004, we issued an ''Order Directing Clarification of Record,'' calling upon the parties to provide us in rapid fashion additional position statements and record references that would clarify how the concerns we expressed were addressed in the record.

We duly received materials first from the State, then from the Staff and Applicant. The State then declined a chance to file a final response, expressing the view that it need not do so if no reliance was to be placed on what it viewed as additional materials the Staff had impermissibly provided without seeking to

---

[21] It should be noted that, although the hearings were ''closed,'' they were not held in a ''secretive'' manner — no information upon which our decision is based was unavailable to the parties, and no decisionmakers met privately with any party. To the contrary, at all sessions, all three parties — the Applicant PFS, the Intervenor State of Utah, and the NRC Staff — were represented by counsel, and each had full opportunity to present its own witnesses, to cross-examine opposing witnesses, and to introduce (or to oppose the introduction) of documentary evidence.

A court reporter prepared a verbatim transcript of the entire closed proceeding. That Transcript, and all the other evidence in the case, has been available to counsel for all the parties, including the State, and will be available to the Commission and to any federal courts that may be called upon to review our decision.

[22] The Commission urges that a decision should typically be rendered within 60 days of the filing of the final briefs. *See Statement of Policy on Conduct of Adjudicatory Proceedings,* CLI-98-12, 48 NRC 18, 21 (1998).

reopen the record.[23] At that point, we indicated in an e-mail advisory to the parties that the State's filing, received December 22, would be deemed the final brief on the merits.[24]

B. Pending Contention

The issue that has thus occupied so much of our attention the past several years had its genesis in the portion of consolidated Contention Utah K that concerned alleged ''credible accident'' scenarios that could result in impermissible radiological releases from the proposed storage facility.[25] The Board combined the State's contention with similar contentions introduced by two other parties[26] that raised similar issues regarding consideration of credible accidents.[27]

After a series of rulings,[28] Contention Utah K was winnowed down to the following:

> The Applicant has inadequately considered credible accidents caused by external events and facilities affecting the [independent spent fuel storage installation], including the cumulative effects of military testing facilities in the vicinity.[29]

---

[23] NRC Staff's Response to Licensing Board's Order Directing Clarification of Record (Dec. 16, 2004) at 9-11, where the Staff urged that the State had impermissibly sought to reopen a closed record while, seemingly inconsistently, presenting its own new materials.

[24] *See* note 22, above, and accompanying text. During the briefing period, the State had also sought leave to file a new contention based on information that had only recently come to its attention. The briefing of that matter overlapped with the briefing of the clarification we had sought related to the structural evidence. Similarly, the preparation of our decision on that new contention, issued earlier today (*see* p. 650, above), overlapped with preparing this Decision.

[25] *See* LBP-98-7, 47 NRC 142, 190 (1998).

[26] The consolidated parties were (1) Confederated Tribes of the Goshute Reservation and (2) Castle Rock Land and Livestock and Skull Valley Company (collectively Castle Rock), and the combined contention was originally designated as Contention Utah K/Castle Rock 6/Confederated Tribes B. *See* LBP-98-7, 47 NRC at 157, 247.

[27] As first consolidated, the contention read as follows (*see* LBP-99-7, 47 NRC at 253):

> The Applicant has inadequately considered credible accidents caused by external events and facilities affecting the [independent spent fuel storage installation] and the intermodal transfer site, including the cumulative effects from the nearby hazardous waste and military testing facilities in the vicinity and the effects of wildfires.

[28] *See* LBP-99-34, 50 NRC 168 (1999); LBP-99-35, 50 NRC 180 (1999); LBP-99-39, 50 NRC 232, 237-38 (1999).

[29] LBP-99-39, 50 NRC at 240. On May 31, 2001, the Board granted in part, and denied in part, the Applicant's motion for partial summary disposition of various aspects of Contention Utah K. LBP-01-19, 53 NRC 416, 455-56 (2001).

In early follow-on rulings, however, the Board dealt with a number of aspects of those military operations.[30] Thus, as the time for trial approached, there were left, to be the subject of evidentiary presentations, only the matters eventually covered in our earlier ''probability'' opinion.[31]

C. Substantive Information

As seen above and in the Appendix, this litigation has a complex procedural background. In contrast, its substantive background may be described relatively simply.

1. Geographic Setting

Skull Valley is framed by the Stansbury Mountains to the east and the Cedar Mountains to the west. Its width varies, but for purposes of this general description the Valley can be regarded as some 10 miles wide. To the north of the Valley is the southern end of the Great Salt Lake. A bit south of the Lake, Interstate 80 runs in an essentially east-west direction (paralleled by the main line of the Union Pacific Railroad just to its north).

An exit from I-80 partway across the Valley provides access to Skull Valley Road, which runs north-south down the Valley all the way to the Dugway Proving Ground. Some 25 miles south of I-80, the road passes through the Reservation of the Skull Valley Band of Goshute Indians. The Band has leased some of its land west of the road to the Applicant for the proposed temporary facility for aboveground storage of spent nuclear fuel.

At one point, the Applicant planned to use Skull Valley Road as a truck route to bring the spent fuel on the last leg of the journey from various reactors around the country. But the Applicant later proposed to construct a rail spur, off the main line of the Union Pacific (which by then has cut south of I-80), down the west side of the Valley to the facility. After an evidentiary hearing on the environmental and wilderness issues involved, we rejected the Southern Utah Wilder-

---

[30] *See* LBP-03-4, 57 NRC at 86 (citing LBP-01-19, 53 NRC 416, which disposed of such matters as those related to general aviation, cruise missiles, and the use of military ordnance).

[31] In addition to considering the F-16s headed down Skull Valley, the evidence at the first hearing, and our decision thereon, involved possible site impacts stemming from flights on the so-called ''Moser Recovery Route,'' emergency landings at Michael Army Air Field (at the Dugway Proving Ground), dropped ordnance, and operations in the Utah Test and Training Range itself. *See* 57 NRC at 122-32.

ness Alliance's challenge to that rail-line proposal. LBP-03-30, 58 NRC 454 (2003).[32]

2. Military Operations

The matter before us arose because military aircraft from Hill Air Force Base, northeast of Salt Lake City, are regularly flown down Skull Valley on their way to the Utah Test and Training Range (UTTR), the nation's largest overland training area, located to the west of the Cedar Mountains in the State's West Desert. Put simply, the flights down the Valley are relatively routine in nature, as the pilots get themselves and their craft prepared to participate in very intensive training maneuvers in the UTTR, which they enter by, in effect, making a U-turn at the southern reach of the Valley. *See* 57 NRC at 110 n.68.

As this litigation developed, the focus came to rest on the 7000 or so flights a year pilots make in the Valley in the F-16, a single engine fighter aircraft. Not surprisingly, the historic crash rate of that aircraft, and the causes of those crashes, as well as the speed and angle of the planes at impact, became the subject of extensive evidentiary presentations in the two sets of hearings we held on this subject.

Although we cover that evidence in detail in Part II, below, it is worth noting at this juncture that a good proportion of F-16 crashes stem from engine failure. When faced with that emergency, pilots are trained to ''zoom'' their aircraft, thereby trading their forward speed for a higher altitude and therefore gaining more time to deal with the emergency. The planes' trajectory and the pilots' activities after the conclusion of the zoom maneuver were the subject of extensive testimony in both sets of hearings, and we discuss in Part II the extent to which the zoom maneuver and its typical aftermath help us in predicting patterns of crash impacts and angles.

3. Facility Design

As noted above, the multipurpose canisters (MPCs) containing spent fuel from various nuclear reactors around the country are to arrive by rail at the facility's Canister Transfer Building. There, each MPC would be removed from the *transportation* cask in which it traveled from the reactor to the site and placed in a concrete and steel *storage* cask, fabricated onsite, which would then be moved to the concrete storage pads by a massive transporter.

---

[32] Although we held that wilderness values were neither apparent in the area in question nor affected by the rail spur, we noted (LBP-03-30, 58 NRC at 475-76) that the final word as to wilderness designations lay with the U.S. Congress.

The storage area would employ 500 such pads, each 30 feet wide by 67 feet long, sized to hold eight cylindrical storage casks upright in a 2 by 4 array. The pads would be arranged in two cohorts, each consisting of twenty-five columns of ten pads laid end to end. The two cohorts of pads would be separated by 150 feet.

The distance between each of the end-to-end pads in a column would be 5 feet. In contrast, the side-to-side distance between pads in adjacent columns would be 35 feet, providing a passageway for crawler access to the four cask locations on the nearer side of each pad to its left and right.

This pad/cask geometry comes into play, of course, in calculating both (1) the spatial parameters of the ''target'' that would be presented to a crashing aircraft (the ''A'' factor, representing site Area, in the screening formula (*see* p. 659, below) that was a focus of the first phase of the aircraft proceeding), and (2) the subsequent interaction among casks, and between plane and casks, after an initial crash impact. For example, because the severity of impacts to the side of a cask depends on the flight angle, the array of casks closest to the approaching plane provides some degree of shielding to the casks behind them.

D. Decision Process

Contention Utah K's long history before the Board was set out in Section B, above. Two key steps we took along the way were to limit the scope of that contention by granting in part the Applicant's motion for summary disposition (LBP-01-19, 53 NRC 416) and, after lengthy hearings, to decide the ''probability'' phase of the contention (LBP-03-4, 57 NRC 69). We focus below on that latter phase, and the manner in which it led to the current phase.

1. ''Credible Accidents''

Stated simply, of concern during the first ''probability'' set of hearings was the likelihood of an accidental aircraft crash into the proposed facility, for nuclear facilities have to be designed against only those radiation-releasing accidents that are sufficiently likely to be deemed ''credible.'' In other words, if the possibility of such an accidental crash occurring proved too remote, then the Applicant did not have to protect against that possibility. To that simple statement, however, need to be added two explanations — one very short, the other not so.

In the first place, longstanding Commission precedent circumscribes Board hearings by explaining that they are *not* the place to consider *deliberate* terrorist-type attacks. That precedent was followed here.[33]

---

[33] To be sure, one of the reasons behind *closing* our hearing to the public was to keep crash impact information and analyses out of the hands of those who might *deliberately* put them to nefarious use.
(Continued)

Secondly, the ''credible accidents'' test deserves more explanation in light of the complicated, two-part proceeding that has taken place here. To go back to the beginning, the admission of the State's ''credible accidents'' contention required us, in theory, to undertake a detailed examination of the probability of radiation release from aircraft crashes. In that respect, the Commission has, over the years, developed a standard for determining which events must be considered in the design of nuclear power reactors.

For consideration of aircraft accidents, the standard is that ''if the probability of aircraft accidents resulting in radiological consequences greater than 10 CFR Part 100 exposure guidelines is less than about'' 1 in 10 million per year,[34] that potential accident *need not* be considered in the design of the facility[35] (according to these guidelines, an event that must be considered is referred to as a ''design basis event'' or a ''credible accident'').[36] Because of the nature of the facility at issue here, however, the Commission established a different threshold probability for a design basis event — at a PFS-like facility it is one in a million per year, rather than the 1 in 10 million standard applicable to nuclear power reactors.[37]

But the *scope* of the hearing involved only the threat posed by *accidental* crashes, not *deliberate* ones. This limitation follows the agency's long-term practice, dating from the days of the Atomic Energy Commission (*see Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 851 (1973)) and renewed after the events of September 11, 2001, that agency hearings are not the place to attempt to address concerns about terrorism. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340 (2002), discussed in LBP-03-4, 57 NRC at 78 n.4.

Instead, protection of nuclear facilities against terrorism has been undertaken by the Commission itself — outside the hearing process — in conjunction with other federal agencies, civilian and military. In a word, then, the protection afforded the PFS site (or any site housing spent nuclear fuel) against deliberate aircraft crashes is viewed as coming not from a *Board hearing* attempting to *evaluate* that possibility, but from the *federal initiatives* attempting to *prevent* that possibility.

[34] *See, e.g.,* CLI-01-22, 54 NRC 255, 260 (2001), referencing NUREG-0800 at 3.5.1.6, wherein the quoted material is set out.

[35] NUREG-0800, ''Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants,'' Rev. 2 (July 1981), at 3.5.1.6, Section I, and Section II, subsection 1, final paragraph (stating the converse).

[36] *See, e.g.,* CLI-01-22, 54 NRC at 259.

[37] At the outset, based on pleadings the parties had filed with us, we sought the Commission's formal guidance on whether the standard determining the credibility of accidents that might affect nuclear power plants — 1 in 10 million per year — should be relaxed for facilities like that proposed by the Applicant here. The Commission responded by setting the one in a million standard, meaning that this facility need be concerned only with events ten times *more* likely to occur than the even rarer ones that nuclear power plants need to guard against.

More specifically, we made an initial ruling on the design standard for accidental aircraft crashes at the proposed facility and found that the facility need not be designed to withstand aircraft crashes having less than a one-in-a-million (1×10^{-6}) chance of occurring. *See* LBP-01-19, 53 NRC at 430-31.

(Continued)

A key to understanding this stage of the proceeding involves appreciating that, while prior rulings may have referred — in shorthand fashion — simply to the probability of *an aircraft crash into the site,* what is now (and always has been)[38] at issue is the probability of *a radiation release caused by such an aircraft crash.* In other words, the event that has to be guarded against is an accident causing a release. This is what the Commission addressed, and it is the event that was examined and described in the Standard Review Plan (NUREG-0800) to which the Commission referred in ruling that the appropriate threshold probability for a PFS-like facility is one in a million (the ''designated threshold'').[39]

To our knowledge, in every previous case before a licensing board (and/or the Commission), the determination as to whether or not a potential radiation release from an aircraft crash was a ''credible accident'' was resolved by simple examination of the probability of a crash into the *site.* For if *that* probability itself is *lower* than the threshold, the inquiry need go no further — regardless of the potential radiation consequences, the sheer unlikelihood of the accident's occurring at all removes any need to look into how severe it might be. This led to the shorthand way of describing the issue.

On the other hand, if the probability of a crash itself were known in advance to *exceed* the designated threshold (i.e., the acceptable probability of a radiation-releasing event), an applicant might typically elect not to pursue the site further through the application process, much less the adjudicatory one. That election might be made even though an aircraft crash into a site does not make it certain that radiation will be released (the crash might not hit a radiation-confining structure or, if it did, the structure might not be breached). To our knowledge, no case has been heard before a licensing board or the Commission wherein the probability was close to the designated threshold — because, we speculate, sites for which the probability was seen to be close were rejected by the applicants *a priori* and they chose, for any number of possible reasons, not to pursue inquiry about such sites any further.

Here, we previously found that the probability of a crash *into the site* did indeed exceed the designated threshold. Rather than abandon the effort, however, the Applicant (eventually supported by the Staff) took a legitimate but unusual approach — taking a closer look at the crash sequence to determine the probability, not just of a crash, but of one that would release radiation. In doing so, the Applicant expected to be able to establish that the vast majority of aircraft

---

But recognizing the novelty of that ruling, and the pivotal role that it would play in the eventual outcome, we sought formal advice by referring our interlocutory ruling to the Commission for its determination. The Commission accepted our referral and upheld our determination. CLI-01-22, 54 NRC at 257.

[38] *See* LBP-03-4, 57 NRC at 136.

[39] *Ibid.*

crashes into the site would not rupture an MPC contained in a cask, and therefore would not release radiation, and therefore would not need to be designed against, *notwithstanding the initial site-focused determination appearing to point the other way.*

A site-focused probability determination begins with a classic ''four-factor formula,'' which we describe elsewhere (and which the parties to this case accepted as the appropriate way to compute that probability). Use of that formula serves only to determine the *probability of a crash into the site,* which was all that was involved in our mid-2002 hearing. At that hearing, we were to determine whether the chance that an aircraft would crash into the proposed facility was (1) greater than 1×10^{-6}, in which case the facility would have to be shown (or redesigned) to withstand the event without significant radiological release, or (2) less frequent than 1×10^{-6}, in which case the accident would be deemed not ''credible,'' meaning its occurrence and its consequences could be safely disregarded.[40]

After our March 2003 decision on that issue went against the Applicant, the unusual — but appropriate — next step was that, at the Applicant's instance, we were asked to hear evidence on the details of such crashes, studying the spectrum and effects of such crashes and evaluating which crashes would (or would not) cause radiation releases. That examination involved considerations enormously more complex than has been the historical norm. We discuss both hearings in more detail below, devoting considerable attention to the previous hearing because of its relationship to the current one.

2. ''Probability'' Hearing and Decision

After the Commission set the design basis threshold probability at 1×10^{-6}, the factual issues were ripe for consideration by the Board. Although other military operations were also considered, the primary focus of the hearing was on the F-16 flights from nearby Hill Air Force Base that were passing over Skull Valley on their way to the UTTR.

At the heart of that hearing was the aforementioned four-factor screening formula that the NRC Staff has long used to calculate the risk of an aircraft crashing into an NRC licensed facility.[41] Although the parties disagreed mightily as to what the evidence showed as to the values to be assigned three of the factors,

[40] *Ibid.*

[41] The formula is contained in the ''Aircraft Hazards'' portion of the Staff's Standard Review Plan, NUREG-0800.

they accepted that the formula itself appropriately focused on those factors as the starting point for our evaluation.[42]

The formula's notation is $P = C \times N \times A/w$. Those designations represent that the probability (P, in accidents per year) is determined by multiplying the aircraft's historic accident rate (C, in accidents per mile) by the number of flights per year (N) and by the effective area of the facility (A, in square miles) divided by the width of the airway (w, in miles).

The parties presented extensive evidence and arguments about the value we should assign to three of the factors (A, the site area, was not contested). But it became clear early on that, even if the Applicant's values were accepted, it would be unable to prove via the formula that an accidental crash into the site had less than a 1×10^{-6} chance per year of occurring.[43]

This led to the Applicant's attempt to gain acceptance for adding a controversial fifth factor — the so-called ''*R*'' factor — to the standard screening formula. Intended to reduce the site impact probability, the R factor seeks to account for asserted ''pilot avoidance'' conduct, i.e., the claimed action pilots would take, if able to do so, to guide their planes away from vulnerable ground sites before ejecting in an emergency where a crash was likely.

The State made two arguments against the Applicant's *R* factor. In short, those arguments were that (1) the four-factor formula devised by the Staff was well established and did not allow for a fifth factor and (2) the value that the Applicant wanted to assign to *R* — an 85% reduction in accident likelihood — was not supported by the evidence. LBP-03-4, 57 NRC at 90.

The Board rejected the State's first argument that the formula could not be changed.[44] We did agree, however, with the State's second argument, that the *evidence* regarding the *R* factor did not justify *the massive reduction in probability that the Applicant sought.*

In doing so, the Board evaluated the *R* factor on the Applicant's terms, considering how often F-16 pilots are in control of their aircraft during an

---

[42] At the outset of the ''consequences'' phase, Judge Abramson — who had been assigned to the case after the ''probability'' phase — asked the parties whether the formula, long-used as a rough ''screening'' device for determining the acceptability of a site, should also be used to determine more precise probability matters (Tr. at 17,720). That question would be lingering here, but for the parties' unmistakable agreement that the case should be decided by application of the formula (Tr. at 17,720 (Turk), Tr. at 17,720-21 (Barnett), 17,729 (Soper)).

[43] Of course, had the 1 in *10* million standard applicable to nuclear power plants been retained as the guidepost, the Applicant would have been ten times farther away from a showing of compliance. In this regard, *see* Appendix at 709, n.8, below.

[44] We reasoned that, while the original formula does not explicitly contemplate the *R* factor, neither is consideration of such a factor *legally* prohibited, such as by way of agency regulations or Commission precedent. Therefore, we reasoned, as long as the addition of the *R* factor has a factual and technical justification, then it could be added to the standard probability formula. LBP-03-4, 57 NRC at 91-93.

emergency ($R1$) and how often pilots in control will attempt to steer the plane away from something on the ground before ejecting ($R2$). The Board accepted the Applicant's $R1$ evidence that, taking into account only the F-16 crashes that are ''Skull-Valley type events'' (that is, crashes that occurred in circumstances that could also exist in Skull Valley flights), pilots are in control of their planes 90% of the time. *Id.* at 98-99.

In evaluating $R2$, however, the Board determined that the Applicant's assertion that pilots will attempt to steer away from objects on the ground in 95% of the cases was unfounded. *Id.* at 99-110. We found that the theory (based on expert opinion, not actual data) that a pilot *will, with almost absolute certainty,* avoid the facility when in an emergency situation and under considerable stress had not been established. *Id.* at 100, 107-09.[45]

In other words, the Board determined that the evidence setting a high value for $R2$ was too uncertain to be relied upon in making a safety decision for nuclear facility licensing. Thus, the Board did not accept the Applicant's and Staff's position on the R factor, and instead relied on the traditional four-factor formula in evaluating the probability of a crash into the proposed facility.

The Board applied the four-factor formula to all of the State's proposed accident scenarios, including F-16 crashes into the facility, other airplane crashes into the facility, and ordnance strikes into the facility. We determined that the evidence was insufficient to establish that the accidents had less than a one-in-one-million chance of happening.

To the contrary, we found through use of the formula that the probability of an F-16 impacting the facility is 4.29×10^{-6}, that is, the probability of such an accident is more than four times greater than the standard for a ''credible accident'' set by the Commission. *Id.* at 122.[46] Thus, we determined, the Applicant had failed to establish that an aircraft crashing into the facility was not a ''credible accident.'' The Applicant was therefore left to establish, in a subsequent ''consequences'' phase of the hearing, that the design of the facility is robust enough so that a crashing F-16 would not penetrate a cask or that, if it did, there would be no significant radiation impact for the public. *See* p. 644, above.

---

[45] Although we rejected it for the purpose and to the extent then offered, we did not indicate that the theory had no merit whatsoever. We return to it for another purpose later (*see* the portion of Part II setting out several conservatisms supporting our decision).

[46] Of course, given the lack of absolute precision in the values found for the formulaic factors (see discussions in our previous decision regarding crash rate, width of airway, and number of flights), the ''4.29'' result may appear more precise than it is. Regardless of the number of significant digits, the point is the same — the Applicant's proof failed by a factor of over four.

3. The ''Consequences'' Hearing

After we decided in LBP-03-4 that the probability of a crash of an F-16 fighter jet from Hill Air Force Base into the Applicant's site was too high to permit facility licensing, the Applicant and Staff took an appeal to the Commission, as we had indicated might be appropriate at that juncture. *Id.* at 142-44, 231. In response, the Commission exercised its discretion to decline review of our ''probability'' decision until we heard the ''consequences'' part of the contention. CLI-03-5, 57 NRC 279, 282-84 (2003).[47]

The Commission noted that it expected the consequences proceeding could be completed by the end of 2003. *Id.* at 284-85. We will return to that point, but need first to indicate what transpired at the beginning of that proceeding.

a. Scope of Hearing

At the outset of this ''consequences'' phase, the State sought to define its scope broadly enough to allow for the presentation of evidence on the radiological consequences that would result from the breach of a cask's MPC. The Applicant argued, however, that the scope of the consequences phase should be more narrow, limited to the Applicant's effort to demonstrate that the probability of such consequences left an MPC breach as a noncredible event. Under that view, it was said, radiological consequences would not need to be examined in detail.

We had foreseen, in our first decision, the possibility of this type of disagreement as we moved ahead. Colloquially, all had talked about a two-part proceeding, one involving ''probability'' and the other embracing ''consequences,'' those being the two factors in a risk determination. But we had noted that the risk question could be more precisely separated into three parts: probability of a crash into the site, leading to cask/canister breach, leading to radiological consequences. LBP-03-4, 57 NRC at 136 n.110. As we observed, depending on how the second factor was defined, it could be viewed as either part of the probability (of a cask breach) calculation or as part of the consequences (of a site impact) analysis. *Ibid.*

In that light, we did not view it as necessarily an impermissible approach to separate consideration of the second factor from the third one. At that point, the State was ready to, and pressed to, proceed on the third factor. The Applicant and Staff indicated they were unprepared to do so. We made the pragmatic,

[47] As we were preparing for that hearing, the Commission, which does not usually encourage wholesale interlocutory appeals, decided to do so at that stage of this case to ''expedite the final stages of a licensing process that has dragged on for a number of years.'' CLI-03-16, 58 NRC 360, 360 (2003). As a result, challenges to many prior Board rulings in this proceeding were considered and rejected by the Commission last year. *See* note 13, above.

time-saving decision to have the hearing focus on only the second factor.[48] But we took two additional actions as well.

First, we indicated that the State would be permitted to make an offer of proof, pursuant to 10 C.F.R. § 2.743(e), at the outset of the hearing. The State in fact did so. *See* Tr. at 19,689-90.

Second, the Board Chairman advised the Applicant and Staff that, given the posture of the case, their unreadiness to proceed may have engendered lasting prejudice to their cases. Specifically, they may have forfeited any opportunity to address the radiological consequences issue later, if they were unsuccessful on the MPC-breach matters on which they were ready to proceed to trial. *See* Tr. at 19,666-77; unpublished Memorandum Concerning Scheduling (Apr. 15, 2004) at 4.

Against that background, we need add only that the reason we did not entertain the evidence the State proffered is that — even though the Applicant does not characterize it this way — in essence the Applicant is, for purposes of this phase only, not challenging the *notion* that the radiological consequences of an MPC breach could be beyond acceptable norms.[49] But because in its view the probability of such a breach is below one in a million, then even if the probability of excessive consequences of such a breach is taken as a certainty (expressed as unity), the overall risk of an accident that results in excessive radiological releases (being the product of the two factors) remains at less than one in a million. For that reason, the evidence reflected in the State's offer of proof was, and remains, rejected as not material to the more narrow issue before us.

b. Result of Hearing

Put in layman's terms, the Applicant's approach at the hearing was a simple one. As noted above, we had held at the end of the first hearing that the probability of an accidental F-16 crash into the site was just under 4.3 in a million per year. In essence, by analyzing (1) the structural characteristics of the casks and (2) the impact speeds and angles of the applicable universe of historic F-16 crashes, the Applicant attempted to show at the second hearing that there is at least an 80%

---

[48] *See* unpublished Memorandum Concerning Scheduling (Apr. 15, 2004) at 3-4.

[49] Specifically, the Applicant does not concede, as a *factual* matter, that even its ''unanalyzed events'' (see Part II, below) would lead to any, much less excessive, radiological releases (although it does not argue that there is *no* speed at which a crashing F-16 would breach a canister). In contrast, our analysis in the text above is performed ''as if a conservative assumption were made'' that such a breach *does* occur for the accidents that are not ''credible,'' simply to demonstrate how the ''probability times consequences equals risk'' formulation jibes with the regulatory standard. LBP-03-4, 57 NRC at 138, *citing* Staff explanation from April 8, 2002 oral argument.

chance that a (hypothetical) future crash into the site would *not* breach an MPC holding the spent fuel.

If that showing were successful, it would of course point to the converse existence of at most a 20% chance that a crash into the site — itself only a 4.3 in a million probability — would breach an MPC. Taking the two factors together would yield no more than a 0.86 (less than one) in a million chance of anything that would cause a radiological release, and success for the Applicant.

In Part II, below, we explain why our decision today essentially holds that the Applicant's evidence established its point. Before turning to the merits, however, we think it important to explain why we are rendering this Decision now, rather than much earlier.

c. Timing of Hearing

The Commission's ''year-end 2003'' goal for our Decision was not able to be met, despite the best efforts of the Board and all counsel involved. This was in large part due to (legitimate) extra time consumed by the Staff's Requests for Additional Information from the Applicant, and the Applicant's revisions to its license application, *all as reflected in the periodic orders we issued at different stages.*

We might leave it at that. But the Commission has placed extensive emphasis in recent times on the need for expedition in the adjudicatory process, and this last phase has taken far longer than the Commission expected — in a proceeding that it described a while ago (*see* note 47, above) as having already ''dragged on'' for a long time. Thus, we think we owe it to the Commission, which asked us to report on this subject (CLI-03-5, 57 NRC at 285), to shine additional light on the matter. We do so in the Appendix to this opinion.

II. THE MERITS

Before this Board is the question of whether the release of radiation arising out of the crash of an F-16 aircraft (taken together with the impact of ordnance jettisoned from such a crashing aircraft) into the facility is a ''credible event.'' For the purposes of evaluating this matter, the Commission has set as the standard[50] that if the probability of such an occurrence is less than 1.0×10^{-6}, it would not be a credible event.[51] If such an occurrence is not a credible event, it is not part

[50] CLI-01-22, 54 NRC 255, 257 (2001).

[51] For ease of reference, we will use the scientific notation throughout this Decision.

of the ''design basis,''[52] and therefore there is no need to engineer the facility to accommodate (withstand) such an event.

1. The Analytical Background

In prior hearings, the parties presented evidence on, and the Board considered, the probability that an F-16 (or the ordnance it carries) would crash into the PFS site. The Board found that there was a 4.29×10^{-6} probability of that occurrence.[53] Similarly, the Board found that there was a 2.11×10^{-7} probability of jettisoned ordnance hitting the site.[54] Since the Board had determined that this probability exceeded the threshold for treatment as a design basis event, the Applicant elected to look further at the probability evaluation, reasoning that an aircraft or a piece of ordnance that hits the site will not necessarily impact on and breach one of the spent fuel storage casks and thereby cause a release.[55] Thus the Applicant continues to attempt to demonstrate that the probability of occurrence of the events in question is so low that these events need not be considered in developing the design of the facility.[56]

Therefore, in the present portion of this hearing, the parties have addressed whether an aircraft (or ordnance that is jettisoned from an aircraft) that crashes into the PFS site will impact and breach a cask. In doing so, the parties have made a number of assumptions (discussed in depth below).

The issue before us involves *the limited safety question of whether the canister will, in a crash situation, maintain its integrity as a radiation boundary,* and not whether it would, when subjected to a lesser crash impact that causes no radiation release, keep the spent fuel bundles from sustaining any damage. In that regard, an incident that does not release radiation, but nonetheless causes the overpack and the MPC to be so damaged that the fuel contained within the MPC is no longer intact, may well be significantly more likely than one that is so damaging that radiation is released. But such incidents are not at issue here. Under the regulatory system, such incidents — because they are not radiation releasing — are to be dealt with by a licensee if and when they occur. Under that circumstance, the agency will become heavily involved (as it does in the aftermath of any accidents) to assure that possible effects of radiation arising out of the recovery operations are safely handled. Such incidents may present a serious problem in terms of what

---

[52] *See* 10 C.F.R. Part 72, Subparts E and F.

[53] LBP-03-4, 57 NRC at 122.

[54] *Id.* at 131. We note, however, that the prior Board did not consider the fact that some of the aircraft involved in jettisoning their ordnance will carry more than one piece of ordnance, a fact which needs to be considered in the present evaluation.

[55] *See* Part I, above.

[56] *See id.*

it takes of a licensee to clean up, but with no radiation ''consequences,'' they do not have to be designed against.

Rather than attempt to examine every possible event and then determine which events cause a breach and from that determine the probability of a breach, the Applicant elected to examine the inverse problem — the Applicant has attempted to delineate a set of events that it alleges do *not* cause a breach. Since the universe of events can be divided into breach and nonbreach, the probability of a breach would be *no more than* 1.0 minus the probability of the set of events that are determined not to breach.[57]

While the Applicant does not claim that it has thus defined *all* events which do *not* breach a cask, it takes the view (**with which we agree**) that so long as the probability of the remaining unanalyzed events (referred to as the Unanalyzed Event Probability or **UEP**) is less than the 1.0×10^{-6} threshold, it need not examine any of those events — for it will have already established that the probability of a breach is less than the threshold and therefore that a breaching event is NOT a design basis event. This approach — *if successful* — would allow the Applicant to bypass the difficult task of assessing how, if there were a breach, the different radioactive nuclear materials in the MPC would be released, dispersed, and find the pathways into the human population at site boundaries, an issue that the State wished to litigate.[58]

2. The Technical Approach

The technical problem has been divided into two basic pieces: *first,* examine the physical effect a crashing aircraft or falling ordnance has, at a particular speed and angle, on the steel-lined cement ''**overpack**'' cask, to determine whether or not that impact damages the stainless steel multipurpose canister (**MPC**) contained within the overpack — either through penetration of the overpack by the incoming aircraft or ordnance, or via a dynamic interaction between the overpack and the MPC, thereby (in either case) causing release of radioactive byproducts contained within the MPC (the foregoing being referred to as the ''**structural analysis**'');[59] and *second,* examine the probability of the incoming

---

[57] We say ''no more than'' because, by definition, we have no information on any of the events that have *not* been examined. Therefore, it is not known whether any particular event in that set would or would not cause a breach, but for purposes of the Applicant's theory it would not matter if they did.

[58] *See* Part I, above.

[59] The principal consideration for this category of events is whether or not radiation is released. Therefore, *independent of the degree of damage sustained by the overpack, the sole consideration for this analysis becomes whether or not the MPC retains its integrity as a containment vessel.* Thus the overpack could be viewed, for this particular analysis, as one of the ''barriers'' protecting the spent

(Continued)

aircraft or ordnance impacting on the overpack at a speed greater than the highest (as determined in the structural analysis) nonbreaching speed and at an angle **x x x x x x x x x x x x x** to the surface than the ''critical'' angle[60] (this latter analysis being referred to as the ''**probability analysis**'').[61] The structural analysis is then used to establish what amount to ''set boundaries'' for the probability analyses to enable computation of the probability of the set of nonbreaching events, which are bounded by the ''worst case'' nonbreaching event that has been analyzed (for the purposes of this discussion, the ''**bounding event**''). Having so determined the probability of the *non*breaching event set, which is bounded by the chosen ''worst case bounding event,'' the probability of the *breaching* set (i.e., the UEP) is then bounded as 1.0 minus the former.

3. The Structural Analysis

The Applicant and the Staff have examined a series[62] of hypothetical radial

---

fuel and fission products from release from their confinement within the MPC, by interfering with the incoming airplane or ordnance before it impacts the MPC.

[60] The analyses indicated that, for impacts on the side of the overpack, aircraft impacting **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x,** and therefore the parties have mutually assumed, for the purposes of this analysis, that if an aircraft impacts at an *angle equal to or greater than,* and at a *speed equal to or less than,* those for which analyses demonstrate nonfailure, those impacts would also not cause failure. We find that approach to be scientifically sound, and hereby adopt that hypothesis.

[61] A thorough discussion of this approach is set forth in Applicant Exh. 265: C. Allin Cornell, Probability Assessment of the Aircraft Crash Impact Hazard for the Private Fuel Storage Facility Based on Engineering Evaluations of Storage Cask and Canister Transfer Building Structural Integrity (Rev. 1) (Jan. 2004) [hereinafter Cornell Report], including, among other things, the method for incorporating the effects of angle and azimuth of impact and the effective areas of storage cask tops and sides.

[62] The Applicant provided twelve analyses (ten of which modeled radial impacts on the casks). The Staff reviewed the Applicant's analysis, and also contracted with Sandia National Laboratories to perform an independent analysis to confirm the Applicant's results. All of the ''examinations'' have been through the use of LS-DYNA, a sophisticated computer code intended for use in the analysis of complex dynamic structural loading scenarios (i.e., *there is no direct experimental evidence* on the entire scenario, although there is substantial experimental evidence supporting most of the models and modeling assumptions in the codes as used herein).

There is an old adage among the developers and users of computer codes for complex engineering problems that everyone believes the computed results obtained from such codes except the people who wrote them. In this instance, all parties were ''users'' of these codes, but none were developers of the codes in question, and each party challenged the results obtained by the other for a variety of reasons.

However, the Staff's consultants performed ''confirmatory computations'' using their computer codes to make a determination regarding the general accuracy of the computations performed *(Continued)*

impacts[63] by aircraft traveling at speeds of **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x.**[64] According to their most recent analyses, such crashes do not result in material penetration into the overpack, and result in maximum tensile strains in the MPC below 10%.[65] The Applicant and the Staff

---

by both the Applicant and the State. In most instances, the computer ''models'' (numerical representations of the ''Problem'' to be analyzed) developed by the Applicant differed in material ways from those developed by the State, and therefore direct comparison of computed results was impossible. Nonetheless, all parties attempted to model the scenarios at issue; the differences in their modeling essentially amounted to different assumptions about what and/or how particular components or phenomena needed to be modeled. The record is replete with testimony and documentation of the results of those computations and the differing views regarding sources of uncertainty or conservatisms in the computed results.

A *common thread runs through these analyses*: independent of the particular computer model and the particular computer code, they all result in prediction of a maximum strain in the MPC (defined in the text of this ruling) and those maximum strains all fall within a certain maximum. In the present case, the overriding (and underlying) issue is *whether or not the MPC can withstand such a strain without failure to retain its containment capability*. Thus we are able to focus on that particular issue, and are not forced to deal with the question of which analysis method is the most accurate.

[63] While it is obvious that not all impacts would be radial, this conservative assumption is deemed by the Applicant and the Staff **x x x x x x x x x x x x x x x x x x x.** The State has argued that the incoming aircraft or ordnance might ricochet off the first cask if it does not impact radially, and would also cause some torque to be applied to that cask, but has not presented any analyses to demonstrate that the results of a secondary impact could be as severe as the primary impact or that the results of a nonradial primary impact would be expected to be more severe than those of a radial impact. We find that there is sound reason to believe that the effects of the primary impact upon the incoming aircraft or ordnance would deform and break up the impacting object such that a secondary impact could not be as severe as the primary impact. Therefore, we agree with the Applicant and the Staff that **x x x x x x x x x x x x x** by a nonradial impact would be bounded by that caused by a radial impact and, therefore, that there is no need to delve into the issue of what damage would be caused by a secondary impact because the associated primary impact which has been analyzed indicates the maximum damage that could be expected to the MPC in such an event. Furthermore, we are persuaded that there must exist, in the set of events, assumed to be purely radial impacts, a number of nonradial impacts that are essentially glancing blows which would have **x x x x x x x x x x x x x x x x** effect than a pure radial impact. Therefore, the assumption that all impacts are radially is markedly conservative **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x.**

[64] *See* Testimony of Alan I. Soler on the Structural Effects of a Potential F-16 Impact on a Spent Fuel Cask Contention Utah K/Confederated Tribes B (July 12, 2004) at 18-19, 20 [hereinafter Applicant Direct Testimony on Structural]; NRC Staff's Testimony of Gordon Bjorkman, Robert Shewmaker, Robert Kalan, and Kenneth Gwinn Concerning the Consequences of an Accidental F-16 Aircraft Crash into a Hi-Storm 100 Cask at the Proposed PFS Facility (July 12, 2004, as revised August 6, 2004) at 13 [hereinafter Staff Direct Testimony on Structural (Bjorkman et al.)].

[65] *See* Tr. at 19,606 (Staff witness Bjorkman noting that all the parties found maximum tensile strain in the MPC to be below 10%). The Staff calculated a maximum actual true strain in the MPC of 8.5%. *See* NRC Staff Rebuttal Testimony of Gordon Bjorkman, Robert Shewmaker, Robert Kalan, and Kenneth Gwinn Concerning Cask Structural Issues (July 29, 2004, as revised August 9, 2004)

(Continued)

conclude from this that all the events impacting at a *lower* speed or at a *greater* angle **x x x x x x x x x x x x x** would not cause a breach of the MPC.[66] Without, at this point, either accepting or rejecting the computed results for the ''bounding event'' as presented by the Applicant, *we subscribe to this analytical approach.*[67]

The State submitted numerous aircraft impact analyses (also assuming radial impact), but some of these were shown to have had modeling errors; accordingly the State's last analysis — of an aircraft impacting the overpack at a speed of **x x x x x x x x x x x x x x x x x x x x x x x** from the horizontal,[68] presented during our September 2004 continuation of these hearings — was the only one upon which we can place reliance.[69] None of the State's analyses (even those with modeling errors) indicate that an aircraft materially penetrates the overpack, and that latest analysis indicates a maximum tensile strain in the MPC of approximately 5.9%.[70] Thus, although the scenarios evaluated, and the modeling employed, by the parties are different, there is a *common result for aircraft impact that the maximum tensile strains predicted to occur in the MPC are less than 10%.*[71]

The results for ordnance impact are, however, not so easily compared. On the one hand, the State's analyses of ordnance, using the Applicant's suggested ''corrections,'' assumed the impacting **x x x x x x x** bomb-class was completely

---

at 7-8 [hereinafter Staff Rebuttal Testimony on Structural (Bjorkman et al.)]; Tr. at 16,941, 17,128 (Kalan). The Staff at various points in its testimony presented an estimated plastic strain in the range of 10-20% (*see* Staff Direct Testimony on Structural (Bjorkman et al.) at 15; Staff Exh. 67, Confirmatory Structural Analyses of an Accidental F-16 Crash Event onto the Proposed Private Fuel Storage Facility (HI-STORM 100 Dry Cask Storage System) (May 11, 2004) at 54; Tr. at 16,736 (Gwinn). The Staff's experts concluded in their rebuttal testimony that, while there are higher strain values in the upper corner of the MPC where it strikes the rigid wall of the overpack, these strains are compressive and are not a threat to the integrity of the MPC; rather, the tensile strains, at 8.5%, in the MPC shell are the most important strains to consider when evaluating the structural integrity of the MPC post-impact. *See* Staff Rebuttal Testimony on Structural (Bjorkman et al.) at 7-8.

[66] *See* note 60, above.

[67] For an explanation of tensile strains and other matters related to the ability of materials to withstand forces, see note 86, below.

[68] *See* Tr. at 19,448 (Bjorkman).

[69] *See* Tr. at 17,623-25 (Aramayo). All of the State's prior analyses indicate a form of numerical error which resulted in computation of unphysical gross very localized distortion of the fuel basket, thereby causing the code to compute large deformations of the MPC because of its computed interactions with the fuel basket. When the input assumptions causing those numerical errors were corrected by the State in this last ''run,'' that phenomenon was no longer present in the computed results. *See id.* at 19,269 (Aramayo).

[70] *See* Tr. at 19,460 (Bjorkman), 19,504 (Hoffman), 19,506 (Sozen).

[71] *See* Tr. at 17,128 (Kalan confirmed the Staff's maximum tensile strain in the MPC), 19,460 (noting State's maximum tensile strain in the MPC), 19606 (Bjorkman stating all parties agree that the maximum tensile strain the MPC will be under 10%).

rigid and that the steel in the overpack lid had weak material properties.[72] This resulted in a computation indicating that **x x x x x x**-class bomb impacting the cask at **x x,** and maximum strain in the MPC of 14%.[73]

On the other hand, the Staff's consultant's analysis modeled the bomb (after correcting certain input errors) as if it were made up of the actual materials at design thicknesses and strengths (i.e., a ''deformable'' bomb, not a rigid one), and used true stress strain properties for the overpack steel lid.[74] These results indicated that there would be very little penetration into the overpack lid as the bomb deformed and disassembled, dispersing its nonexplosive content.[75]

In an effort to identify how much of the difference in the above results was due to rigidity of the bomb and how much was due to the assumed material properties for the overpack steel lid plates, the Staff and the State made computations in which they used the same computer code and input (including the ''rigid'' bomb model) but changed the State's original input for the properties of the steel that makes up the top of the overpack lid to utilize steel structural response functions closer to a ''true stress strain'' curve (which is required by the computer code).[76] These analyses used somewhat different steel properties, resulting in computation by the State of **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x**[77] **x x x x x x x x x x x x x x x x**

[72] *See* State of Utah Testimony of Mete A. Sozen, Christoph M. Hoffman, and Sami Kilic for Contention Utah K/Confederated Tribes B Cask Breach Probability Proceeding (Structural) (July 12, 2004) at 21 [hereinafter State Direct Testimony on Structural]; Tr. at 16,535-36 (Kilic); *see also* State of Utah Rebuttal Testimony of Mete A. Sozen, Christoph M. Hoffman, and Sami Kilic for Contention Utah K/Confederated Tribes B Cask Breach Probability Proceeding (Structural) (July 29, 2004) at 6 [hereinafter State Rebuttal Testimony on Structural].

[73] *See* State Rebuttal Testimony on Structural at 5. The State provided the initial velocity as **x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x.**

[74] *See* NRC Staff's Testimony of Gordon Bjorkman and Gustavo Aramayo Concerning the State of Utah's Analyses of the Consequences of an Accidental F-16 Aircraft Crash or Munitions Impact into a Hi-Storm 100 Storage Cask at the Proposed PFS Facility (July 12, 2004, as revised August 6, 2004) at 11 [hereinafter Staff Direct Testimony on Structural and Ordnance (Bjorkman and Aramayo)].

[75] *See id.* 11-12. The practice bombs carried by the aircraft in question here contain concrete powder designed to have the same weight and density as the explosive that would be contained in live ordnance.

[76] *See* Tr. at 17,668-75 (Bjorkman). The computer code used for these analyses requires the user to put its input in the form of ''true stress strain'' rather than engineering stress strain as the State had done (following the data supplied by the Applicant, *see* Tr. at 16,895, 17,672 (Bjorkman) in its initial analysis).

[77] *See* Tr. at 19,134 (Bjorkman).

x x x x x x x x in the case of the use of the Staff's estimate of actual physical properties.[78]

But even in the analysis by the State with the ''weaker'' assumed steel properties, the ordnance was so slowed down by the energy loss **x x x x x x x x x x x x x x x x x x x x x**[79] that the resulting computed maximum tensile strain in the MPC was approximately 4.3%.[80] Since it is clear that the **x x x x x x x x x** actually carried by the aircraft in question are not rigid, and since it is clear that a ''deformable'' bomb **x x x x x x x x x x** than a rigid bomb, *we find that these computations indicate, with reasonable confidence, that the* ***x x x x x x x x x x x x x x x x x x x*** *will, at the speeds used in these analyses, not penetrate the overpack and that damage, if any, to the MPC will result in maximum tensile strains well below the maximum of 10% indicated for full impact of an F-16 at the speeds and angles discussed above.*[81]

With the evidence before us indicating that the maximum tensile strains in the MPC from the scenarios examined will not exceed 10%, we must then examine whether there is reasonable confidence that the MPC would, when subjected to such strains, retain its physical continuity and therefore its capacity to retain the fission products it contains.[82] *The issue — upon which this case turns — devolves to identification of the appropriate method to determine the strain at which this particular stainless steel will fail in tension.*

In this regard, the parties' approaches are diametrically opposed. The Applicant[83] and the Staff[84] argue that this must be addressed by examining actual known (measured) physical properties of the material at issue, focusing on the experimental evidence shedding light on the maximum true strain at tensile failure. The State argues, on the other hand, that civil engineering standards (including certain ones adopted by the U.S. Department of Energy for examination of the ability

---

[78] *See* Tr. at 17,673-74 (Bjorkman).

[79] *See* Tr. at 19,119 (Bjorkman).

[80] *See* Tr. at 19,134 (Bjorkman), 19,418-19 (Sozen acknowledging that, in terms of strain on the MPC, the Staff and State run are no different).

[81] *See* Tr. at 19,460 (Bjorkman), 19,504 (Hoffman), 19,506 (Sozen).

[82] *See* Tr. at 15,674-79. During the first days of hearing, the Applicant made clear that the design goal of the cask is to prevent a radiological release. Therefore, as long as the MPC is not breached, the cask has not failed. The Applicant noted that while it will develop a removal process to deal with the accident, it does not matter, for purposes of this proceeding, how damaged the cask becomes as long as the MPC does not rupture.

[83] *See* Applicant Direct Testimony on Structural at 2, 6-8; Rebuttal Testimony of Alan I. Soler and Charles J. McMahon, Jr. on the Structural Effects of a Potential F-16 Impact on a Spent Fuel Cask — Contention Utah K/Confederated Tribes B (July 29, 2004) at 13 [hereinafter Applicant Rebuttal Testimony on Structural].

[84] *See* Staff Direct Testimony on Structural (Bjorkman et al.) at 7-8; Staff Rebuttal Testimony on Structural (Bjorkman et al.) at 4-5.

of certain nuclear structures to withstand aircraft impact) prescribe a defined maximum strain above which a component must be assumed to fail.[85]

Put another way, we are faced with the choice of examining the issue from basic materials principles or viewing it from the perspective of a civil/structural engineering problem. Although one might not expect these approaches to be mutually exclusive, they have been formulated just that way in this proceeding.[86]

The Applicant and the Staff propose that, once the experimental data are used to determine the actual tensile rupture strain, one should then apply a certain ''safety factor''[87] (i.e., determine that the analytical result is acceptable only if the computed strain falls short of the experimentally determined failure strain by a multiple selected to give sufficient comfort that failure would not occur),[88] a

---

[85] *See* State Direct Testimony on Structural at 7-10.

[86] The following discussion relies heavily upon the ability of materials to withstand the application of tensile and compressive forces and the measures used to describe them among engineers. For the uninitiated, generally, when a force is applied to a material, its change in length (either stretching or compressing), which depends upon the force per unit area (defined as stress), is commonly discussed in terms of the engineering strain, which is computed by dividing the change in length (parallel to the applied force) by the original length. While strain is taking place, the cross-sectional area actually changes (enlarging if the force is compressive and decreasing if the force is tensile).

Two common ways of describing the stress have evolved: ''engineering stress,'' which is defined as the force divided by the unaltered cross-sectional area; and ''true stress,'' which is the force divided by the altered cross-sectional area. However, while ''engineering strain'' is the change in length divided by the unaltered original length, ''true strain'' is defined as the natural log of the original cross-sectional area divided by the altered cross-sectional area. (NOTE that, since these are simply computations based upon measured force, length, and area, the ''engineering'' stress and strain for a given condition can be mathematically converted to the ''true'' stress and strain for the same conditions by simply knowing the unaltered cross-sectional area and length and the altered cross-sectional area and length.)

Materials can be strained a small amount without undergoing permanent deformation — such deformation being generally referred to as ''elastic'' strain, and the point at which the material begins to become permanently deformed being the ''elastic limit.'' Once a material is strained beyond its elastic limit (that is, it will not return to its original dimensions once the stress ceases), it does not cease to offer resistance to further strain, and in fact, in some circumstances, its ability to resist further elongation actually increases. However, further strain becomes, at least in part, permanent, and is referred to as ''plastic'' strain. Some materials, like stainless steel, are able to undergo quite large plastic tensile strains before finally rupturing, and are sometimes referred to as being very ''ductile.''

[87] *See* Applicant Direct Testimony on Structural at 72-73; Applicant Exh. 293; Staff Direct Testimony on Structural and Ordnance (Bjorkman and Aramayo) at 27.

[88] *See, e.g.,* Tr. at 15,310-11 (Soler). In this regard, we note that the State's expert witness (Dr. Sozen) did not take issue with the principle that steels can be strained well beyond their elastic limit and well beyond the limit suggested by the civil engineering codes to which he refers for a failure criterion. He argued, instead, that there is increasing uncertainty in material behavior once the steel is strained beyond the threshold values he would suggest. Therefore, he suggests, one should, rather than beginning from the experimentally determined strain at failure and applying a safety factor, elect

(Continued)

common approach in engineering analysis. Such a ''safety factor'' would account for the fact that those properties are measured in quasi-static laboratory conditions (experimentally determined information regarding dynamic loading is discussed below) on samples that have not been subjected to the variations that might be expected to occur in the manufacturing, construction, and assembly process.

On the other hand, the State argues in essence that when this stainless steel is strained beyond approximately 2.5% true strain, it must, in accordance with customary civil engineering principles, be assumed to fail.[89] The State's arguments rely heavily upon a standard developed by the Department of Energy[90] (hereinafter, the ''**DOE Standard**'') for application to assessment of structural integrity of nuclear facilities subjected to dynamic loading by aircraft impact — an approach that on its face appears meritorious.

Upon closer examination, however, three things are clear: (1) the standard set forth in Table Q1.5.8.1 of the ANSI/AISC Standard and referenced in the DOE Standard is inapplicable, by its own terms, to ''pressure vessels''[91] (and the Applicant and the Staff assert that the MPC is a ''pressure vessel'' rather than a structural member for purposes of assessment in accordance with the methodology referenced in the DOE Standard);[92] (2) the DOE standard was developed with a clear focus upon ''structural'' members, which are made of carbon steel, not stainless steel;[93] and (3) the DOE Standard was intended to be used as a tool to assess whether or not a particular structural member would fail to be able to continue to perform its *structural* function when subjected to the load at issue, not for use to assess the point at which a steel component would fail by stretching to the point that it ruptures (or that a hole was created in it as a result of the tensile

---

to assume that any strain beyond that determined using a ductility ratio specified for acceptable loads from a design perspective would cause failure in tension. Tr. at 16,242-44 (Sozen).

[89] *See* Tr. at 16,514-16 (Sozen).

[90] *See* State Exh. 254, United States Department of Energy Standard (DOE-STD-3014-96), *Accident Analysis for Aircraft Crash into Hazardous Facilities* (Oct. 1996); State Exh. 229, American National Standard Institute/American Institute of Steel Construction (ANSI/AISC) Standard N690, *Specifications for the Design, Fabrication, and Erection of Steel Safety-Related Structures for Nuclear Facilities* (1994) at 23, Table Q1.5.8.1, *Allowable Local Ductility Factor,* μ*, to be Used in Design of Steel Structural Elements for Impractive and Impulsive Loads* (2002 Supplement) [hereinafter ANSI/AISC Standard]; *see also* State Direct Testimony on Structural at 8-9.

[91] *See* State Exh. 295, ANSI/AISC Standard at 23, Table Q1.5.8.1 (as referenced in State Exh. 254, DOE Standard at 76); *see also* Staff Exh. 103, AISC/ANSI Standard at Q1.01 (Scope); Staff Rebuttal Testimony on Structural (Bjorkman et al.) at 5-6; Staff Rebuttal Testimony on Structural (Bjorkman/Aramayo) at 2.

[92] *See* Applicant Direct Testimony on Structural at 68-69; Applicant Rebuttal Testimony at 15-16; Tr. at 16,810-11 (Bjorkman).

[93] *See* Applicant Rebuttal Testimony on Structural at 15-16; Staff Rebuttal Testimony on Structural (Bjorkman et al.) at 6; *see also* Applicant Rebuttal Testimony on Structural at 2, 3, 4, 13-15 (noting differences between austenitic and ferritic steels).

loads).[94] *The result is that, while the State's proposed standard (based upon use of a maximum ''ductility ratio'') is indisputedly applicable to determination of the failure point of the components of a structural steel member in a buckling mode,*[95] *it is unrelated to determination of the failure of a steel component by tensile rupture,*[96] *which is at issue here. We so find.*

The experimental (laboratory) data presented to us indicate that *this particular stainless steel can undergo approximately 90% true strain before it fails by rupture.*[97] While the State did not dispute these data and information,[98] it argues that these laboratory data are inappropriate for use in these circumstances, and that ''real life'' stainless steel will have impurities and irregularities that would make it fail in tension at a materially lower true strain.[99] In support of this proposition, the State points to the fact that this material cannot be expected to be manufactured free of impurities and irregularities, and is welded in numerous locations, all of which (the State argues) would weaken the material.[100]

Although those propositions seem reasonable, the State neither submitted nor pointed to a single piece of experimental evidence supporting them.[101] And the Applicant (supported by the Staff) responded by pointing to the facts that: (a) the

---

[94] *See* Applicant Rebuttal Testimony on Structural at 13-14; Tr. at 16,937-38, 17,041-48, 17,079-80 (Bjorkman).

[95] *See* Tr. at 16,834-43, 16,937-38, 17,041-49, 17,081-82, 17,202-03, 17,250, 17,279 (Bjorkman testimony asserting that the ductility ratio is used to compute buckling failure).

[96] The State's witness has neither presented nor pointed to a single piece of experimental evidence that would support the hypothesis that the steels at issue here would fail to retain their continuity (and therefore their confinement capability) or fail in tension by rupture at any strain nearly as low as the State proposes as a standard for judgment here. *See also* Tr. at 16,839-42 (where Dr. Bjorkman further describes the technical article cited in reference 69 in the Staff Exh. 111, ANSI/AISC Standard at C-18, CQ.1.5.8). In that article, Dr. Bjorkman explains, the authors use the ductility ratio to assess structural failure by examining buckling, not rupture. Thus, Dr. Bjorkman continues, failure was determined by analyzing the point at which a structure ceases to be able to carry a load, buckles, and becomes unstable. Failure is not determined by analyzing the point at which a structure is ruptured. *Id.* at 16,842.

[97] *See* Tr. at 16,004-06 (Bjorkman); Staff Exh. 92, Structural Alloys Handbook (John M. Holt et al., eds., 1996 edition, v.2) at 45. According to Dr. Bjorkman, the Staff's search for material properties in common sourcebooks indicated that the 304 stainless steel's lowest data point value of true strain at rupture they found was approximately 92%. Tr. at 16,006. *See also* Staff Exh. 93, The American Society for Metals International, *Atlas of Stress-Strain Curves* (2d ed.) at 184 (graphing true-stress strain curve of 304 stainless steel and showing that at both elevated and room temperature, the true failure strain was greater than 90%); Staff Rebuttal Testimony on Structural and Ordnance (Bjorkman and Aramayo) at 9.

[98] *See e.g,* Tr. at 16,495-99, 16,505-17 (where Dr. Sozen offered no support for a contrary view despite being afforded extensive opportunity); *see also* Tr. at 16,257.

[99] *See* Tr. at 16,243-44, 16,514-16 (Sozen).

[100] *See* note 99, above.

[101] *See, e.g.,* 16,516-17 (Sozen).

steel plates used to make up the MPC are manufactured, and examined during and after manufacture, to assure compliance with the ASME Code requirements for this material and this application, and that any plate failing to conform to those standards would be rejected from use;[102] and (b) the welds are performed in accordance with ASME-prescribed and -approved processes and procedures, and, since the ASME code requires that the weld material have identical strength to the base material, there is no basis for an argument that the weldment would represent a ''weakness.''[103]

To emphasize this point, the Applicant presented to the Board strained strips of actual weldment material taken from the stainless steel to be used in these MPCs.[104] These strips had been bent to nearly 180 degrees with no visible indication of rupture on the outer elements (which are the elements exposed to tensile strains in such a bend).[105] The Applicant's experts indicated that the tensile strains in the outer elements of that strip would be on the order of 20%.[106] Similarly, the Staff's experts presented samples of deformed stainless steel exposed to very high loads in an experimental environment, and also demonstrated that this particular stainless steel withstood true strains of the order of 90% without tensile rupture.[107]

In addition, the State argued, without submittal of supporting experimental data, that the maximum strain at rupture in tension would be reduced when loads are applied rapidly.[108] The Staff's evidence, however, demonstrates that there is minimal effect on tensile rupture strain at the strain rates computed to occur in these crash events.[109]

Finally, the State argued — for the first time — in its rebuttal brief filed on November 22, 2004, that application of the ASME Code Appendix F criteria would indicate that maximum permissible strains under that code are less than

---

[102] *See* Applicant Direct Testimony on Structural at 69-73; Applicant Rebuttal Testimony on Structural at 5-6.

[103] *See* Applicant Direct Testimony on Structural at 7-8, 71-73; Applicant Rebuttal Testimony on Structural at 2-3; Tr. at 15,242-44 (Soler), 15,724-25 (McMahon).

[104] *See* Applicant Exh. 307 (physical specimen of 1/2-inch weldment bend test).

[105] *See* Tr. at 15,239-40 (Soler).

[106] *See* Applicant Exh. 301, Bend Test of 304 SS; Tr. at 15,240 (Soler).

[107] *See* Tr. at 15,974-16,002 (Kalan), 16,010-11 (Bjorkman); *see also* Staff Exh. 107 (pulled steel).

[108] Tr. at 16,243, 16,524-25 (Sozen).

[109] *See* Tr. at 16,004-10 (Bjorkman); Applicant Exh. 305, W. Lee et al., *The Effects of Strain Rate and Welding Current Mode on the Dynamic Impact Behavior of Plasma-Arc-Welded 304L Stainless Steel Weldments,* Metallurgical and Material Transactions A, vol.35A (May 2004), at 1505; Staff Exh. 92, Structural Alloys Handbook at 45 (providing a table of strain rate effects and ductility); *see also* Tr. at 16,000 (Staff witness Dr. Kalan noting that stainless steel is not particularly strain-rate sensitive).

10%.[110] However, it is clear from both the State's analysis and the responses of the Staff[111] and the Applicant to the Board's December 1 Order requesting clarification of the record,[112] that the State misapprehended the relevant ASME Code provisions, having applied a criterion established for examination of general primary membrane stress (or strain) which is applicable in circumstances where a member is globally (i.e., essentially uniformly) strained — such as loading on a balloon by internal pressure.[113]

To explain further, the ASME Code expressly provides criteria for three types of loadings: general primary membrane stress (as discussed above); primary stress, in which the stress is averaged through the wall thickness of a locally loaded (stressed/strained) region;[114] and local stresses.[115] Since the loadings that are created by the accidents at issue here are clearly not global, but are very localized, we find that application of general primary membrane stress/strain criteria would be incorrect. Furthermore, we find that Appendix F of the ASME Code would guide a user toward use of a localized stress and strain criterion such as has been developed by the Staff's expert, Dr. Bjorkman.[116]

Finally, although we do not endorse, as more fully discussed below, the concept of application of any Code-delineated prescriptive formula for determination of failure in this sort of examination, we note that even if the ASME Code's Appendix F criteria for primary stress/strain were applied (which, although the ASME Code would guide an analyst toward use of a purely local evaluation such

---

[110] *See* State of Utah's Reply Findings of Fact and Conclusions of Law on the Phase II Hearing of Contention Utah K/Confederated Tribes B (Cask Breach Probability) (Nov. 19, 2004) at 15-25 [hereinafter State Reply Findings of November 19, 2004].

[111] In this opinion we do not rely on any material supplied by the Staff in the affidavit of Dr. Bjorkman attached to the ''NRC Staff's Response to the Licensing Board's Order Directing Clarification of Record'' (Dec. 16, 2004) [hereinafter Staff's Response of December 16, 2004]. Thus the Board, consistent with the State's position in the ''State of Utah's Answer to the Board's Directive Re Clarification of the Record'' (Dec. 21, 2004), did not ask for any further briefs from the State on this matter.

[112] *See* Staff Response of December 16, 2004; Applicant's Response to Board Order Directing Clarification of the Record (Dec. 16, 2004) [hereinafter Applicant's Response of December 16, 2004]; *see also* Order Directing Clarification of Record (Dec. 1, 2004).

[113] *See* State Reply Findings of November 19, 2004 at 15-16, 19; Applicant's Response of December 16, 2004 (Dec. 16, 2004), at 17-18.

[114] *See* Applicant's Response of December 16, 2004, at 21-22; Staff Response of December 16, 2004, at 4.

[115] *See* Staff Exh. 90, American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code: ASME an International Code, *Rules for Construction of Nuclear Facility Components* (2001), Appendix F ¶ F-1341.2 (Plastic Analysis); *see also* Staff Response of December 16, 2004, at 4; Applicant's Response of December 16, 2004, at 21-22.

[116] *See* Staff Response of December 16, 2004, at 4-5; Staff Rebuttal Testimony on Structural and Ordnance (Bjorkman and Aramayo) at 7-8.

as has been performed by the Staff, is clearly more applicable than the criterion for general primary membrane stress/strain), the maximum permissible tensile strain would be on the order of 25%,[117] well above the maximum of 10% computed by any of the three analyses at issue here, that the parties predict to result from a ''bounding event'' F-16 crash.

As we mentioned above, the fundamental issue underlying this portion of the argument is whether the ''failure criterion'' for the MPC should be based upon actual expected materials properties or upon the use of a formulaic standard used in civil or mechanical engineering.

We, therefore, do not find persuasive the arguments presented by the State that one should assume failure at a specific ductility ratio (which amounts to the prescriptive establishment of a defined maximum strain not based upon material properties and relatively invariant with choice of materials) or that one should apply a particular criterion suggested in the ASME Code. In this regard, the State's expert is a civil engineer experienced in structural design,[118] but has essentially no experience in (and is not an expert in) materials properties, the behavior of any steel under large strain conditions, or the behavior of stainless steels under the circumstances at issue.[119]

Nonetheless, while we are persuaded that the MPC's stainless steel can withstand, without tensile rupture failure, much more than the approximately 2.5% maximum strain that would be suggested by use of a ductility ratio as proposed by the State, and materially greater tensile strains than the approximately 10% indicated by all of the parties' computations, we also believe it would not be prudent to assume that the MPC could handle 90% true strain in tension before losing its integrity as might be suggested by the laboratory data. On this point, the Staff experts testified that application of an uncertainty factor of two or three to the laboratory data would both: (a) adequately accommodate the unknowns regarding the effects of manufacturing and assembly of the MPC; and (b) provide reasonable confidence that a conservative failure criterion was being used.[120] *Therefore, given that the maximum computed true tensile strain in the MPC in all*

---

[117] *See* Applicant's Response of December 16, 2004, at 21.

[118] *See* State Direct Testimony on Structural at 1-3, Biographical Data: Mete A. Sozen; *see also* Tr. at 16,289-92, 16,523-24, 16,528-29, 19,531-32 (Sozen).

[119] *See* Tr. at 16,289-93, 16,300-01 (Sozen acknowledges that he is neither a mechanical engineer nor a metallurgist, that he has seldom worked with stainless steel, and in fact, this hearing was the first time he has looked at stainless steel ''intensely'').

[120] *See* Tr. at 15,986-88 (Staff witness Dr. Gwinn commenting that 50% of the ultimate strain would be a reasonable ''upper limit'' to the strain to which a material should be subjected and that at 30% one would have ''a comfort factor that is good''), 15,995 (Gwinn again noting that going to half of the ultimate strain will account for any flaws, welds, or any other weaknesses in the material); *see also* Staff Rebuttal Testimony on Structural (Bjorkman/Aramoyo) at 4-5 (noting that the ASME

(Continued)

of these analyses is less than 10%, which is more than a factor of nine below the laboratory data, we find that there is reasonable confidence that the MPC would not fail under the conditions predicted by these analyses.

Based upon the foregoing, this Board accepts the principle put forth by the Applicant and supported by the Staff that the MPC will not fail when the overpack is impacted by an F-16 traveling at a speed equal to or less than ***x x x x x x x x x x x x x x x x x x x x x x x*** *or more from the horizontal. We so find. Similarly, this Board finds that the MPC will not fail when the overpack is impacted by a* ***x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x.*** The foregoing events, therefore, become the bounding events for use, after determination of the distribution of the probabilities of impact of an F-16 (or the **x x x x** ordnance) at various speeds and angles, in determining the UEP.

4. The Probability Analysis

The Applicant's structural analysis resulted in a bounding incoming F-16 flight at **x x x x x x x x x x x x x x x x x x x x x x x x,**[121] while the State's computation assumed an impact speed of **x x x x x x x x x x x x x x x x x x x x x x x x.**[122] Since neither computation reached the threshold strain in the MPC, we find that it is appropriate to use the larger set (bounded by the Applicant's bounding case which we have just approved) to determine the UEP. Thus we turn now to determination of the probability that a certain crash speed is below the bounding case, which will enable the determination of an upper bound on the UEP. To make this determination, we must look to the parties' analyses regarding what crash data should be included in making the computation.

There are limited data available regarding crashes of F-16 aircraft under conditions that are reasonably similar to those of Skull Valley. From crash data

---

Code allowable strain limit is 46%), 9 (noting 92% true rupture strain for 304 stainless steel). Such a ''safety factor'' would result in use of a ''failure criterion'' of approximately 45% true strain, a number completely consistent with the 46% criterion proposed by Staff expert Bjorkman. *Id.* at 4-5.

[121] *See* Applicant Exh. 265, Cornell Report at 23 (Dr. Cornell evaluated the impact on the cask at 40 inches below the lid); *see also* Testimony of C. Allin Cornell on the Unanalyzed Event Probability of Aircraft Crash or Jettisoned Ordnance Impacts at the PFSF — Contention Utah K/Confederated Tribes B (July 12, 2004) at 16 [hereinafter Applicant Direct Testimony on Probability].

[122] *See* State of Utah Supplemental Testimony of Michael C. Thorne Ph.D. for Contention Utah K/Confederated Tribes B Cask Breach Probability Proceeding (Sept. 9, 2004) at 2; *see also* State Exh. 238, M.C. Thorne, Ordnance Impacts and Aircraft Crashes at a Proposed Private Fuel Storage Facility for Spent Nuclear Fuel in Utah: Summary of Probability Estimates (May 2004) at 13 (setting forth four case scenarios for side and top cask impacts at varying speed and angles) [hereinafter Thorne report]. It was not until Dr. Thorne's supplemental testimony, prepared at the request of the Licensing Board to address the issue of an appropriate flight data set, that the State set forth the boundary speed of **x x x x x x** cask side impacts.

available from 121 accidents worldwide, the Applicant has identified 61 crashes that it believes are applicable and that were considered as ''Skull Valley type incidents'' by the prior Board.[123] Among those 61 incidents are four crashes that essentially occurred on runways.[124] In this proceeding, the Applicant eliminated from consideration the four incidents that were essentially runway incidents.[125] The Staff concurred with the Applicant that these remaining fifty-seven incidents are those properly considered in development of the probability distributions.[126]

The State, on the other hand, argues that in addition to the four runway-related accidents, thirteen more incidents should be excluded, including nine loss-of-engine-power incidents which occurred during takeoff and landing,[127] and four

---

[123] *See* Testimony of C. Allin Cornell, Wayne O. Jefferson, Jr., and Ronald E. Fly on the Appropriateness of Using Skull Valley Type Events for Evaluating the Speed and Angles of Potential F-16 Crashes in Skull Valley, Utah — Contention Utah K/Confederated Tribes B (July 12, 2004) at 3 [hereinafter Applicant Direct Testimony on Speed and Angles].

[124] *See id.* at 5-6; *see also* Applicant Exh. 266, Maj. Gen. Wayne O. Jefferson, Jr. et al., Evaluation of F-16 Aircraft Crash Impact Speed and Angle for Skull Valley-Type Events (Rev. 1) (Jan. 2004) at 2, Tab A (Chronological Listing of Data from F-16 Mishap Reports FY89-FY98) [hereinafter Burdeshaw Report]. These are the incidents occurring on April 24, 1992; May 5, 1992; August 27, 1993; and March 30, 1994.

[125] *See* note 124, above [*discussing four excluded flights*].

[126] *See* NRC Staff's Testimony of Kazimieras M. Campe and Amitava Ghosh Concerning F-16 Crash Impact Speeds and Angles for Skull Valley Type Events (July 12, 2004, as revised Aug. 6, 2004) at 11-12 [hereinafter Staff Direct Testimony on Speed and Angles]; NRC Staff's Rebuttal Testimony of Kazimieras M. Campe and Amitava Ghosh Concerning F-16 Crash Impact Speeds and Angles (July 29, 2004, as revised August 20, 2004) at 2-3 [hereinafter Staff Rebuttal Testimony on Speed and Angles].

[127] *See* State of Utah's Testimony of Lt. Col. Hugh L. Horstman and Lt. Col. Luis N. McDonald III for Contention Utah K/Confederated Tribes B Cask Breach Probability Proceeding (Speeds and Angles Ordnance) (July 12, 2004) at 15 [hereinafter State Direct Testimony on Speed and Angles] at 15 (noting that while all nine accidents were caused by engine failure, they should be excluded because the flight characteristics, namely altitude and speed, could not occur over the PFS site because there are no runways for pilots to attempt to land or takeoff). The nine excluded events include accidents on: August 7, 1990 (engine failure during pilot's landing approach); February 20, 1991 (engine failure as pilot attempted to reach a landing field); May 7, 1991 (engine failed 52 seconds after takeoff); June 8, 1991 (pilot attempted to land following engine failure); January 13, 1992 (pilot attempted to land following engine failure); September 18, 1992 (engine failed after pilot took off and raised landing gear); April 21, 1993 (pilot attempted to land following engine failure); July 11, 1996 (pilot attempted to land following engine failure); January 29, 1997 (pilot attempted to land following engine failure). *Id.* In proposing elimination of these accidents, the State argues that in an accident in Skull Valley over the PFS Facility, a pilot would not attempt to land in the event of an engine failure and would not delay an ejection (thus affecting the crash angle and speed) in an attempt to reach a runway. Similarly, the State argues, a pilot would not experience engine failure in Skull Valley at the low speed and altitude experienced immediately following takeoff. *Id.*

accidents that involved other situations that could not happen in Skull Valley.[128] Much of the testimony centered on which of those thirteen should be included,[129] and there was very little disagreement on the methodology that should be used to generate the probabilities once the proper data set was selected.

This question of whether or not the proper set of events is the fifty-seven events proposed by the Applicant and the Staff or the forty-four events proposed by the State has a relatively important effect upon the final probability distributions. In addition, it is clear that inclusion of irrelevant or unrepresentative data, or conversely, exclusion of relevant data, will corrupt the data set and lead to misleading results, particularly where, as here, the size of the data set is small. These issues are addressed below.

Before examining the particulars of each incident to identify those incidents that are properly included in this analysis, we focus upon determining which incidents provide useful information. The technical approach taken by the parties was to examine the incidents for which there is crash impact data to determine if any reasonable correlation could be made between the flight conditions at onset of the incident and the crash speed and angle that must be determined for use in the analyses at hand.

---

[128] *See* State of Utah's Prefiled Rebuttal Testimony of Lt. Col. Hugh L. Horstman (U.S.A.F. Retired) for Contention Utah K/Confederated Tribes B Cask Breach Probability Proceeding (Speed and Angles) (July 29, 2004) at 2-3 [hereinafter State Rebuttal Testimony on Speed and Angles]. These four accidents occurred on: October 22, 1992 (altitude decreased when pilot delayed ejection in an attempt to make emergency landing at an Air Force base); October 25, 1994 (pilot ejected below minimum ejection altitude after attempting to land on runway); August 11, 1993 (pilot delayed ejection to crash on an island instead of over open ocean); July 1, 1994 (initiating event was caused by a bird and the Board ruled in LBP-03-4, 57 NRC at 168, that a bird strike is unlikely in Skull Valley).

[129] The Applicant's witness, Dr. Cornell, argued that the four runway events should obviously be excluded because they include no impact information, speeds, or angles. The remaining flights, however, all provide useful information and data should not be weighted or excluded based on altitude because the probability of a crash exceeding **x x x x x x** is insensitive to such adjustments. *See* Tr. at 17,738-42. While the State witness, Lt. Col. Horstman, agrees that the four runway events should be excluded, he also argues that an additional thirteen events (discussed above) should be excluded because the accident crashes could not occur at the PFS site and including them in the data set lowers the impact speed estimation at the PFS site. *See* State Direct Testimony on Speed and Angles at 14-15; State Rebuttal Testimony on Speed and Angles at 2. Furthermore, Lt. Col. Horstman argues, the Applicant's rationale to exclude the four runway-related accidents, but not the nine accidents that occurred while a pilot was attempting to land on, or take-off from, a runway, is inconsistent. *Id.*

For its part, the Staff, in analyzing the thirteen additional events, concluded that while three of the thirteen (the accidents of April 21, 1993; January 13, 1992; and September 18, 1992) accidents occurred in such close proximity to the runway that they might not be representative of Skull Valley flight conditions, the specific flights parameters are possible in Skull Valley and thus they should not be excluded. *See* Staff Rebuttal Testimony on Speed and Angle at 5. The remaining accidents, the Staff concluded, occurred under flight conditions comparable to those that could occur in Skull Valley regardless of whether the accident occurred during landing or takeoff. *See id.* at 2-7.

There are only fourteen accidents for which the ejection speed and altitude and the crash impact speed are *all* reasonably known.[130] The Applicant's and Staff's analysts used regression analysis to develop from those few incidents a correlation between ejection speed and altitude and the measured speed of impact.[131] Then, from applying that regression analysis, the Applicant and Staff each developed a methodology to expand the data set, using the correlation to estimate the ''missing'' information for the accidents where only partial information was available.

In an effort to determine whether accurate results could be obtained using *only* accidents containing complete data, the Board asked the Applicant to examine the probability distribution based only on incidents with known data and to weight those according to the relative frequency of flights in the two flight ranges, known as Sevier B (3000 feet to 4000 feet above ground level (''ft AGL'')) and Sevier D (approximately 5000 ft AGL to 14,000 ft AGL).[132] In response, the Applicant examined accidents with documented impact speeds and found a data set of fifteen accidents.[133] Of those fifteen incidents,[134] nine originated within Sevier B and six within Sevier D.[135] Because Sevier B is weighted[136] so heavily, however, the nine events originating in Sevier B become the most relevant in considering the estimated probability that a future Skull Valley event would exceed **x x x x x x.**[137] Thus, the effective sample size is diminished from fifteen to nine data

---

[130] *See* Applicant Exh. 266, Burdeshaw Report at 10, Tab G.

[131] *See* Applicant Exh. 266, Burdeshaw Report at 4, 10-11; Tr. at 17,753 (Cornell), 17,758 (Fly); Staff Exh. 100, Dr. Kazimieras M. Campe and Dr. Amitava Ghosh, NRC Staff's ''Evaluation of Aircraft Crash Impact Speeds and Angles considered by Private Fuel Storage, L.L.C. in Its Analyses of Skull Valley Type Events (May 24, 2004) at 14 [hereinafter Staff Evaluation of Speed and Angles]; Tr. at 18,051-52 (Campe).

[132] *See* Tr. at 17,924 (Farrar).

[133] *See* Tr. at 17,922-46 (Board and parties discussing assignment).

[134] *See* State Exh. 278 (Cornell ''homework assignment'' performed at the request of the Board, Tr. at 17,922-26) at 2 [hereinafter Cornell Assignment].

[135] *See* Tr. at 18,074-75 (Cornell); State Exh. 278, Cornell Assignment at 2. In the ''homework assignment'' given to Dr. Cornell, the Board asked him to exclude accidents that occurred above Sevier D and below Sevier B, thus excluding the two high ejection points referred to above and the four takeoff and landing incidents because they are not representative of what might happen in Skull Valley. Though the Board asked the Applicant to include only those accidents with documented speed and angles within Seviers B and D, the Applicant examined only the accidents with documented speeds. As the State points out during cross examination, however, four of the accidents included in the data set had speeds that were estimated by the Applicant. Tr. at 18,075-76.

[136] *See* Tr. at 17,737-41 (Dr. Cornell explaining the methodology that went into weighing the data to account for the majority of Skull Valley flights occurring in Sevier B). Dr. Cornell has weighted Sevier B at 96% and Sevier D at 4% based upon the relative frequency of flights in those height sectors.

[137] Tr. at 18,081-82 (Cornell).

points. Attempts to develop probability distributions of impact speed from those nine data points resulted in a projection with a standard error of estimation that is effectively 50% of the estimate and whose 1-sigma error was the entire width of the projected impact speeds.[138]

Therefore, since a correlation based upon the nine incidents would be so unreliable, the Applicant and the Staff took a different approach to maximize use of all available data, ultimately resulting in use of the entire set of fifty-seven Skull Valley-type accidents to perform the analyses that lead to the probabilities of crash impacts at various speeds.[139] The Staff's experts concurred in the validity of use of all fifty-seven incidents and confirmed the accuracy of the Applicant's correlation,[140] which led to being able to ''fit'' each actually measured impact speed to within 20 knots.[141] Experts representing the Applicant, the Staff, and the State all testified that the correlations of impact speed to ejection altitude and speed are robust (i.e., a good correlation with small error) for these larger data sets.[142] The Applicant and the Staff agree that in eighteen cases, there are reasonably reliable data regarding the altitude and speed at which the pilot ejected from the aircraft, and the Applicant and the Staff argue that this entire set should be used, together with the fourteen incidents where impact speed was known along with the ejection altitude and speed, to develop the probability of impact at various speeds.[143]

In addition to the information added to the data set by inclusion of these events through statistical analysis, there is some logic to their inclusion because, for the incidents in question that are initiated by a loss of engine power, the flight path after engine failure can be predicted with some reliability. This is because, as all parties' experts testified, the pilot would be generally expected, in the case of engine failure, to attempt to gain the maximum possible altitude (to provide

---

[138] Tr. at 18,082 (Cornell). It is well known that the standard error of an estimate is dependent upon sample size alone, and that as data sets become larger, the standard error becomes smaller.

[139] *See* Tr. at 18,085 (Cornell explaining that limiting the data to documented speeds discarded about two-thirds of relevant accident data), 18,698 (Cornell explaining that he used the entire data set in his regression analysis to establish impact speed).

[140] *See* Tr. at 18,795 (Ghosh), 17,969-71 (Campe, Ghosh); *see also* Staff Exh. 119, NRC Staff's Response to the Atomic Safety and Licensing Board's Questions Concerning the Probability of an Accidental F-16 Crash into the PFS Facility at 4-5.

[141] *See* Tr. at 17,902-03, 18,088-91 (Cornell discussing the 20-knot standard deviation), 17,872-73, 17,893 (Applicant witnesses Fly and Jefferson discussing use of all fifty-seven data points to establish correlation). While this did not lead to a perfect ''fit,'' it led to a correlation coefficient very close to 1.0. *See* Tr. at 17,853 (Cornell stating that the confidence bound in the regression analyses was in the order of 95%); Applicant Exh. 266, Burdeshaw Report at 10-11, Tab G.

[142] *See* Tr. at 17,753 (Cornell), 17,758 (Fly), 17,969-71 (Campe, Ghosh), 18,911 (Thorne).

[143] *See* Applicant Exh. 266, Burdeshaw Report at 10-11, Tab H; Staff Exh.100, Staff Evaluation of Speeds and Angles at 4 (eighteen incidents where ejection altitude and ejection speed were known).

the maximum amount of time to attempt to restart the engine) while not letting airspeed go below 250 knots.[144] With the loss of engine propulsion, the aircraft would then reach a peak in its trajectory and begin descent at approximately 220 knots.[145] Thus, it is reasonable to expect, in cases of engine failure (absent other malfunctions), that the aircraft will begin its descent at 220 knots. The testimony is uncontroverted that the aircraft's control systems will thereafter attempt to maintain that speed and maintain the descent at approximately 6 degrees below the horizon (through manipulation of the aircraft's flight control surfaces).[146] Pilots are advised to eject from the aircraft at no less than 2000 ft AGL, although there was considerable evidence in prior hearings that pilots in fact often stay with their craft below that altitude in their efforts to restart the engine and save the craft.[147] In fact, fifty-two of the fifty-seven incidents being considered by the parties in these analyses were loss-of-engine accidents,[148] and thirty-two of those fifty-two had crash speeds of less than 250 mph.[149] This indicates that the majority of the loss-of-engine accidents indeed crashed at speeds not much faster than would be expected if all procedures were followed and aircraft controls operated as described. Of course, conversely, a large portion of such accidents did not exhibit that predictability. Nonetheless, it is clear to us that, in addition to the mathematical and statistical arguments for expansion of the data set by inclusion of these additional incidents, there is a phenomenological basis for incorporating them as well, albeit with some caution as to actual speeds.

Two accidents involving initiating events other than engine failure resulted in pilot ejection above the top of Sevier D, and the State would have us rule that because no aircraft flying through Skull Valley would be traveling at those altitudes, these incidents should be excluded.[150] We see no reason, however, to exclude such incidents from the data set simply because they originated at a particularly high altitude, since they do represent accident *initiators* that could take place at Skull Valley and thus should not be ignored.

The foregoing analyses raise the question, addressed below, regarding whether, and if so how, this Board should incorporate into its analysis the fact that

---

[144] *See* LBP-03-4, 57 NRC at 171-72; State Direct Testimony on Speed and Angles at 7-8, 18; Applicant Direct Testimony on Speed and Angles at 4-5; Tr. at 17,745-47 (Fly), 17,997-98 (Campe).

[145] *See* LBP-03-4, 57 NRC at 172.

[146] *See* State Direct Testimony on Speed and Angles at 8, 18; Tr. at 17,746 (Fly).

[147] *See* LBP-03-4, 57 NRC at 172; Tr. at 17,805-06 (Fly).

[148] *See* Applicant Exh. 265, Cornell Report, App. A. Analysis of F-16 Crash Impact Speed and Angle Distributions (Rev. 1) at 4,5.

[149] *See* State Exh. 238, Thorne Report, Attach. 1.

[150] *See* Tr. at 18,389-90 (State witness Horstman explaining exclusion of the two flights); State Exh. 238, Thorne Report at Attach. 1 (excluding flight number 8, January 13, 1991, and number 33, September 11, 1993).

approximately 90% of the fifty-seven incidents being considered were initiated by loss of engine power.[151]

A similar issue is raised by a second set of incidents — those that involve events that result in aircraft descending in a ''deep stall.'' There were six incidents (i.e., approximately 10% of all incidents being considered) for which observers described the aircraft as ''falling like a leaf''; in airframe vernacular, this is more accurately described as in a ''deep stall,'' which means the descent is essentially vertical while the aircraft wings and fuselage remain essentially level with the horizon.[152] In those incidents, the aircraft manufacturer has advised the Staff that the descent speed will be no more than 150 knots[153] and the Air Force believes that the descent speed will be between 99 and 148 knots.[154]

Accordingly, although the impact speed of those crashes is not known by any physical measurements, there is good confidence that impact speed for those incidents has an upper bound of 150 mph. We note that the Applicant used an impact speed of 123 knots for its probability computations,[155] which is the average of the range given by the Air Force, while the Staff, in its confirmatory analysis, used the upper-bound speed of 150 knots.[156] For these incidents, the trajectory and impact speed are reasonably computable based solely upon the initiating cause of the accident.

Thus, there emerge two fundamental questions regarding how to approach these data: (1) should the data be limited in some fashion; and (2) in determining what circumstances are relevant for the instant case, should the crash data be examined and utilized from the perspective of how the incidents are initiated, independent of their originating altitude (i.e., if 90% of the relevant incidents are already determined to be initiated from engine failure and 10% initiated from causes that resulted in the aircraft descending in a deep stall, should the probability of a crash initiating from those conditions be 90% and 10%, respectively, and, based upon that, should crash angles and speeds for that 90% and 10% be determined expressly from those two specific types of incidents?

---

[151] Applicant Direct Testimony on Speed and Angles at 6; Applicant Exh. 265, Cornell Report, Analysis of F-16 Crash Impact Speed and Angle Distributions at 4-5.

[152] *See* Applicant Exh. 266, Burdeshaw Report at 4, 11, Tab I. The six deep stall accidents were as follows: January 13, 1991 (hydraulic failure and subsequent flat spin); March 19, 1991 (hydraulic failure, uncommanded barrel rolls); February 19, 1993 (uncommanded climb, aircraft rolling); September 11, 1993 (explosion, fire); June 25, 1995 (stall, fire, and explosion on impact); September 16, 1997 (midair collision followed by loss of control); Tr. 17,811 (Fly).

[153] *See* Staff Direct Testimony on Speed and Angles at 7, 10.

[154] Applicant Testimony on Speed and Angles at 17.

[155] *See* Tr. at 17,922 (Fly); Applicant Exh. 266, Burdeshaw Report at Tab I.

[156] *See* Staff Direct Testimony on Speed and Angles at 7.

Our examination of the crash data makes it clear that those incidents that originated from *engine failure* cannot ALL be presumed to crash at the speeds and angles that would be predicted assuming aircraft controls actually managed the flight until crash. There is every indication, however, that all *deep stall* crashes had essentially the same crash flight path (wings level with a vertical descent) and crashed at speeds below 150 mph. Upon inquiry by the Board of the Applicant, Staff, and State experts,[157] it was clear that none had analyzed the data from the perspective of initiating event, although all had examined the data from the perspective of flight conditions at incident initiation and at pilot ejection.

The Applicant[158] and the Staff[159] experts testified that, because the correlation of measured impact speed to ejection parameters was so good (robust), the proper approach to development of a formula that would predict impact speed from ejection parameters would be to use a correlation developed from the fourteen accidents to analyze the entire set of data points for which ejection parameters are known (consisting of twenty-six data points)[160] and use a regression analysis to develop (using the correlation based upon the fourteen incidents discussed above) predicted impact speeds for all events in that set of forty accidents.[161] Based upon that analysis, probabilities of impact speed were developed for the entire data set of fifty-seven accidents.[162]

When examined on the technical validity of that approach, experts for both the Applicant[163] and the Staff[164] took the position that, because these twenty-six additional incidents represent the available real data on crashes for F-16s, to ignore the information content of any particular incident without sound reason

---

[157] State expert Thorne confirmed that this would be a useful approach (Tr. at 18,946-48), while PFS expert Cornell declined to comment (Tr. at 19,035-36, 19,044), although neither had examined it.

[158] *See* Tr. at 17,743-44 (Fly, Cornell), 17,753 (Cornell), 17,758 (Fly).

[159] *See* Tr. at 18,911 (Thorne).

[160] *See* Staff Exh. 100, Staff Evaluation of Speed and Angles at 4, 5. The Staff details eighteen accidents with known ejection altitudes and speeds, but unknown impact speeds, seven accidents that document only ejection altitude, and one accident that documents only ejection speed, therefore totaling 26 incidents where ejection parameters are known. *See also* Applicant Exh. 266, Burdeshaw Report at 8-11.

[161] *See* Applicant Exh. 266, Burdeshaw Report at 10-11, Tab D, F, G, H.

[162] The parties excluded predicting impact speeds for the four runway-related accidents. *See* Applicant Exh. 266, Burdeshaw Report at 14 n.19. The primary reason for developing impact speeds for the entire data set is that expansion of the impact-speed data set materially increases the breadth of data and a larger data set significantly improves the usefulness of the Cumulative Distribution Function (CDF) and the Complimentary Cumulative Distribution Function (CCDF), which are both needed in assessment of the UEP. *See, e.g.,* Tr. at 18,086 (Cornell notes that smaller data sets produce highly uncertain results), 17,926-28, 18,085-86 (Cornell noting the importance of using all the useful data), 18,901 (Thorne).

[163] *See* Tr. at 17,926-28, 18,085-86 (Cornell explaining why it is important to use all the data).

[164] *See* Tr. at 18,015-17 (Campe and Ghosh noting that a small sample size introduces error).

would create an inaccurate subset of the data. Therefore, they argued, since the ejection parameters are known and since there is such a good correlation between ejection parameters and crash impact speed, it is proper statistical methodology to compute impact speeds for the incidents wherein it was not measured. Thus they used the correlation for impact speed from ejection parameters based upon the fourteen incidents to develop (using a regression analysis technique which is itself unchallenged)[165] a set of formulae to compute impact speeds for the balance of the twenty-six incidents for which the impact speed was not known but ejection parameters were known.

The foregoing approach has merit: given that the correlation developed by the Applicant and confirmed by the Staff was so good for those data points where crash impact speed was measured,[166] and since the ejection parameters are known for a number of other data points, *it is reasonable to utilize the correlation to develop projected crash speeds for those other data points. This enables the utilization of all the relevant information from ALL data for which ejection parameters are known to develop a probability distribution function for crash speed based upon all the available relevant data. We adopt that approach.*

Unfortunately, no success was achieved in attempting to correlate the ejection parameters to the impact angle.[167] Thus, the data could not be expanded as to this parameter.

Turning now to those incidents whose applicability to the situation in hand is in question, we examine first those incidents where the pilot was attempting to find an airfield to land. Testimony provides the following relevant information:

(a) Since these incidents resulted in crashes short of the landing area, the pilot may have been attempting to ''stretch'' the glide path. The State's expert testified that, although trained to use the fact that the maximum range would be achieved by a descent at approximately 6 degrees at airspeed of about 220 knots,[168] a pilot's

---

[165] Although a State witness, Lt. Horstman, had some criticism that estimating impact speed and angles was too speculative (*see* State Exh. 242, Lt. Col. Hugh L. Horstman, Evaluation of Impact Velocity and Impact Angle for F-16 Crashes at the Proposed PFS Site (Sept. 2003), at 6-7), the State nonetheless relied on regression analysis during the hearing (*see, e.g.,* State Exh. 279, M.C. Thorne, Ordnance Impacts and Aircraft Crashes at a Proposed Private Fuel Storage Facility for Spent Nuclear Fuel in Utah: Supplementary Analysis of Probability Estimates (Sept. 2004), at 10-11; Tr. at 18,889 (Thorne); Applicant Exh. 284, Excerpts from Lt. Horstman's Deposition of May 24, 2004 at 159-60 (stating the Applicant's estimates appear to be relatively accurate).

[166] As is mentioned above, our confidence in that approach is in part improved by the fact that one would expect, from the standard post-engine-failure procedures that are followed, such a correlation to exist (and the data bear out this perception) for those incidents where the cause was *solely* loss of engine power (which represented a larger portion of the incidents under consideration).

[167] *See* Applicant Exh. 266, Burdeshaw Report at 3; Tr. at 17,758 (Fly).

[168] There was no disagreement on this basic principle, just disagreement regarding how the pilot would react to the circumstances.

instinct is to pull the nose up in a misplaced effort to ''stretch'' the glide path, but in fact such action results in reduction of airspeed and reduction of glide range.[169] The Applicant's experts testified that a pilot would not contradict that guidance,[170] but there appears to be no evidence to support a conclusion either way regarding pilot actions in any of such incidents included in this data set;[171] and

(b) Since reconfiguring the plane for landing (lowering landing gear, flaps, etc.) substantially reduces airspeed and range, a pilot attempting to ''stretch'' his range would not reconfigure for landing until becoming certain of being able to land.[172] We were advised that landing gear can be lowered in approximately 2 seconds,[173] and therefore there is a reasonable probability, in incidents where the plane crashes materially short of a landing strip, that the plane would not have been ''reconfigured'' and would, instead, have been continuing its glide at approximately 6 degrees and would have crashed in the same mode as if the pilot had not been attempting to reach an airfield.[174] In incidents where the plane crashed near a runway, there is some likelihood that the pilot may have slowed the craft by instinctively raising the nose.

Thus inclusion of these data points in development of a correlation or in development of crash data must be selectively done. We find that inclusion of crashes occurring well short of a runway that have been categorized as ''landing'' incidents and that were initiated by loss of engine power are properly included because the crash characteristics would be expected to be substantially the same as a crash where the pilot was not attempting to land, even where the crash impact speed must be computed from the correlation described above. Crashes occurring near a runway are, however, not properly included for two reasons: (a) there is no

---

[169] *See* Tr. at 18,419-22 (Horstman).

[170] *See* Tr. at 18,511-13 (Fly explaining that the F-16 flight manual instructs that in attempting a flameout (i.e., loss of engine) landing, maximum glide range is achieved at 7-degree angle of attack). Col. Fly further explains that if the pilot attempted to change his angle of attack, he would make his glide shorter, and that he would expect a pilot to follow the flight manual instructions. Tr. at 18,517.

[171] *See* Tr. at 18,511-13, 18,529 (Fly further explaining how changing the angle of attack from the maximum glide path will shorten the glide range), 18,418-22 (Horstman describing how a pilot attempting to land may nonetheless think that pulling up the nose as he approaches the runway will extend the glide). The Applicant's and the State's witness also had some disagreement as to how to characterize several flights in the record, thus increasing the uncertainty in predicting how pilots will react in such circumstances. *See* Tr. at 17,779-82 (Fly disagreeing with State's characterization of several accidents as ''landing accidents'' where the pilot lifted the nose of the plane because he believes that the pilots never intended to land the plane, but were instead lifting the nose of the plane to gain some altitude before ejection, something he describes as a perfectly acceptable flying procedure), 17,791, 17,794 (Fly noting a pilot may lift the nose of the plane up to increase the safety margin during an ejection).

[172] *See* Tr. at 18,399-400 (Horstman), 18,525-26, 18,527-29 (Fly).

[173] *See* Tr. at 18,529 (Fly).

[174] *See* Tr. at 18,404-05, 18,451-52 (noting computer's involvement in impact angle).

runway on or very near the PFS site, and therefore no F-16 could be expected to be attempting to land near the PFS site,[175] and (b) there is a reasonable probability that the pilot interfered with the electromechanically controlled glide path in an attempt to ''stretch'' his glide, thereby making the correlation inapplicable to determination of crash speed for such an incident. Similarly, takeoff incidents in which the aircraft lost power before it reached the 250 knots target for the initiating conditions for a glide should be excluded. This reasoning calls for elimination of four of the sixty-one incidents (the four eliminated by all parties), reducing the applicable set to fifty-seven.

Considering now those six impacts that arose out of a descent in a deep stall, we note that the State would have us exclude the two deep-stall incidents that were initiated above the highest customary flight path (i.e., above the upper extremity of Sevier D).[176] Their rationale is that since flights at such height will not occur in Skull Valley, those incidents are irrelevant.

This forces this Board to consider whether the data should have been partitioned by initiating event and analyzed on that basis — a step not employed by any party, but nonetheless agreed by them to be a sensible one. As we noted earlier, of the sixty-one incidents considered by the prior Board to be relevant, six (approximately 10%) were incidents in which the aircraft fell in a deep stall.[177] This information is no less valuable than the distribution of incidents by ejection altitude and/or speed. Furthermore, as with the crashes where the parties predict impact speed from the ejection parameters, for these deep-stall incidents one can predict impact speed within a very narrow range.

Thus, where the relevant crash data indicate that 10% are crashes in a deep stall and 90% originate from engine failure, it appears to us that it might be manifest error to assume that the same percentages should not apply to crashes originating from flights through Skull Valley.[178] Therefore, *although we do not advocate reanalyzing all these data to develop such an approach, the fact that relevant crash data include incidents initiating at altitudes outside the ranges expected to be flown by the F-16s flying through Skull Valley does not imply that one should not expect approximately 10% of the crashes in Skull Valley to also*

---

[175] As discussed in note 196, below, pilots will not attempt to land F-16s on unprepared surfaces because the planes are too fragile.

[176] *See* Tr. at 18,389-90 (noting State seeks to exclude the flights of January 13, 1991, and September 11, 1993); *see also* State Exh. 238, Thorne Report, Attach. 1 (excluding accidents number 8 and 33 from the relevant data set). The State argues that because the initiating event and the ejection altitude in these two instances occurred above Sevier D they should be excluded from the data set because the crash could not reasonably occur in Skull Valley.

[177] *See* note 152, above.

[178] Even the State's expert concurred that this was useful information which should be considered. *See* Tr. at 18,947-48, 18,951-52 (Thorne).

be deep-stall-type crashes.[179] In fact, *we find that it implies quite the opposite.* Therefore, we see no basis to eliminate the two deep-stall events from use in developing the probabilities simply because they originated at altitudes not flown in Skull Valley. *We are, therefore, not persuaded by the State's arguments that the two deep-stall incidents that initiated above Sevier D should be excluded* and *we find, instead, that those two events are properly included in the computations.*

Having thus determined which of the sixty-one accidents should properly be included in the computation of probability, we can now turn to examination of the probability that the aircraft will impact at angles and speeds above the bounding event (the UEP). The way the hearing developed, this particular computation has been performed for the event that this Board has determined to be the bounding event by the Applicant (and confirmed by the Staff), and has not been performed by the State.

The State's expert has, however, raised a challenge to the methodology that the Applicant and the Staff used to derive their probabilities, arguing that a correlation (which is essentially a ''curve fit'' to the data) has no particular basis and proposing, instead, to use a ''step function'' to describe the probability distribution.[180] The State's expert proposes a step function that results in zero probability for any accident whose impact speed is below the first data point,[181] holds constant at the computed probability of the first data point until the speed of impact reaches the second data point, holding constant at the probability of the second data point until the speed reaches that of the third crash data point, and on through the data.[182]

This particular choice of step function has the effect of shifting the probabilities toward higher crash impact speeds when compared to any other option one could choose (such as the ''curve fit,'' or a linear interpolation, or a step function that

---

[179] One could, following this logic, take the view that the relevant crash data inform us that 10% (six of fifty-seven) of crashes are deep-stall crashes which impact at 150 mph or less and 56% (thirty-two of fifty-seven) are loss-of-engine-power crashes which impact at less than 250 mph because they follow the expected glide path (because the procedures were followed and automatic controls functioned as expected and no other factors intervened). Based on this approach, one would conclude that the data advise that approximately two-thirds of crashes occur at less than 250 mph. This number is consistent with the complex statistical analyses performed by the parties which indicated that the probability of a crash at more than 250 mph is approximately 0.35 (*see* Applicant Exh. 265, Cornell Report, Fig. A-1) and that the probability of a crash at more than **x x x x x** must therefore be materially smaller. In fact, it appears to us to be quite consistent with the Applicant's computed probability of approximately 0.20 for a crash at greater than **x x x x x x.** *Ibid.* Thus this simpler view of the information provided in the accident data (based upon more fundamental principles) gives us confidence that the Applicant's (and the Staff's) computations are reasonable estimates.

[180] *See* Tr. at 18,876-81 (Thorne).

[181] *See* Tr. at 18,881 (Thorne's model has zero probability for any event less than 179 KTAS).

[182] *See* Tr. at 18,870-71 (Thorne).

assumes the probability is equal to the probability of first data point until the crash speed of the lowest impact speed is reached and then jumps to the second step until the speed of the second data point is reached).[183] Because there are so little data at higher crash speeds, such an approach has a material (but not dominating) effect on the Cumulative Distribution Function (CDF) and the Complementary Cumulative Distribution Function (CCDF) and therefore upon the UEP. The State's expert has clearly demonstrated this effect for higher impact speeds.[184]

Upon examination, the State's expert offered no particular technical or scientific justification for why the step function could not have been such that the probability holds constant at the first value from zero speed up to the crash speed of the first data point then jumps to the second value rather than the steps that he employed.[185] In any event, we find it illogical to assume that probabilities would stay constant between data points as they do in either version of the step function. In that regard, we were presented with (and see) no particular reason why, for example, a linear interpolation between data points would not be a better correlation than the step function approach, and that there is no sound rationale for the election to use any particular type of step function.

In the final analysis, we recognize that we have before us sparse data that may be of questionable utility in predicting any particular incident. But, we see no reason to believe that the universe of possible incidents is properly represented by a discontinuous rather than a continuous function.[186] This does, however, raise a particularly important point for this Board. *If, as the testimony indicates, the computed probability of the UEP is materially sensitive to the methodology used to ''fit'' these sparse data, we must exercise caution in interpreting the results.*

In this instance, the Applicant's computation (confirmed by the Staff) — using the regression analysis to ''fit'' the data with a continuous ''best fit'' function (which is an accepted approach to interpretation of data) — yields a

---

[183] *See* Tr. at 18,879 (Thorne).

[184] *See* Tr. at 18,868-70 (Thorne); State Exh. 285, Additional Probability Analysis at 5. State Exh. 285 indicates that using the step function Thorne proposed, when coupled with his proposal to reduce the data set to forty-four incidents, would increase the probability of breach from side impact from 3.75×10^{-7} to 5.06×10^{-7}. However, Dr. Thorne indicated that the dominant cause for this increase was the elimination of thirteen ''takeoff and landing'' incidents from consideration. *See* Tr. at 18,868-69, 18,907.

[185] *See* Tr. at 18,879-82 (Thorne).

[186] While this Board takes judicial notice of quantum mechanical principles, the discretization of energy and other properties characteristic of those principles do not manifest themselves on such a macroscopic level as those at issue here. Therefore, for the resultant probabilities to be quantized as the State's expert suggests would, we expect, imply a first-of-its-kind phenomenon and form the basis for an entirely new field of study.

total of 7.37×10^{-7} UEP.[187] While there is no dispute by the State's expert regarding the regression analysis methodology used by the Applicant and the Staff, the State's expert obtained a larger overall UEP as a result of selecting the worst-case methodology for ''fitting'' the data by using a (discontinuous) step function and reducing the data set by elimination of the thirteen ''takeoff and landing'' accidents and consideration of only thirty-six crash events.[188] Although not directly addressing the overall UEP, the State's expert pointed out that this approach leads to a probability of breaching the cask due to a top or side impact of 5.08×10^{-7} (as compared with 3.75×10^{-7} computed by the Applicant using the entire fifty-seven-accident data set and a smooth curve fit to the data).[189] Although we find that there is no particular justification for use of the State's ''worst case'' analytical methodology, the State's computation emphasizes the fact that use of sparse data, and questions regarding determination of which events to include in performing analysis, can lead to results that one may question.

5. The Ultimate Question

The resultant UEP that would be computed from the Applicant's analysis leads to a 7.37×10^{-7} overall probability of an F-16 breaching a cask.[190] In contrast, the State has proposed between 2.0×10^{-6} and 4.08×10^{-6} as the probability range.[191]

In considering the State's proposal, we note that since approximately two-thirds of all historic crashes occur at 250 mph or less (*see* note 179, above), no more than approximately one-third of the crashes being examined can be expected to be at speeds greater than 250 mph. Even if we were to assume that all impacts at 250 mph or above breached a cask (a hypothesis that is exceedingly conservative given the analyses of crash impacts discussed earlier), the overall UEP would thus be $0.333 \times (4.29 \times 10^{-6})$; in other words, the UEP cannot reasonably be expected to exceed 1.5×10^{-6}. Thus, we cannot give credence to the State's proposed range of UEPs: since one would expect a not-immaterial percentage of crashes to occur between 250 mph and the bounding case of **x x x x x x** for which nonbreach has

---

[187] *See* Applicant Direct Testimony on Probability at 9-10, 21-22; Applicant Exh. 265, Cornell Report at 51; NRC Staff Direct Testimony of Dr. Dennis R. Damon Concerning Aircraft Crash Probability Assessment (July 12, 2004, as revised Sept. 10, 2004) at 4 [hereinafter Staff Direct Testimony on Probability]; Staff Exh. 102, Dennis R. Damon, NRC Staff's Evaluation of Private Fuel Storage, L.L.C. Aircraft Crash Probability Assessment (May 11, 2004, as revised Sept. 10, 2004) at 16.

[188] *See* Tr. at 18,868-73 (Thorne).

[189] *See* Applicant Exh. 265, Cornell Report at 48.

[190] *See* Applicant Direct Testimony on Probability at 21-22; Applicant Exh. 265, Cornell Report at 51.

[191] *See* State Exh. 238, Thorne Report at 21.

been demonstrated, even a very simplistic view of these events advises clearly that the UEP must be materially less than 1.5×10^{-6}.

On the other hand, the State's conservative analysis of breach probabilities would increase the Applicant's number by approximately 0.13×10^{-6} (based upon the increase from 3.75×10^{-6} to 5.08×10^{-6} discussed above), resulting in a UEP of approximately 8.7×10^{-7}. Therefore we see no credible argument for the position that the UEP exceeds 1.0×10^{-6}.

As is obvious, these numbers fall near the Commission-determined 1.0×10^{-6} threshold for determination of whether this accident is a ''credible accident.'' If our analysis ended here, we would have considerable discomfort finding that this is indeed not a credible event. This discomfort is exacerbated by the fact that the data are limited and may have material uncertainties, and by questions regarding how they should be specifically interpreted for use in the analysis at issue here. *However, we gain substantial comfort from the fact that there are four aspects to this analysis wherein large conservatisms are built in.*

First, all aircraft impacts are assumed to be completely radial. While no evidence or computations were presented to this Board regarding either the relative probability of a nonradial impact versus a radial impact or the consequences of a nonradial impact (a glancing blow), we find that there is reason to believe that a nonradial impact will impart less momentum to the cask, cause less damage to the cask impacted, and therefore cause less damage to the MPC. Furthermore, there is no reason whatsoever to believe that all impacts would be radial,[192] and in fact, we find, based upon simple geometric considerations, that the probability of a purely radial impact is significantly less than the probability of a nonradial impact. In fact this view is borne out by the testimony of witnesses Cornell and Thorne when asked.[193] *Therefore, while we are unable to precisely quantify this effect, we find that a material conservatism (which could amount to as much as a factor of five) is introduced by this assumption.*[194]

Second, the parties have assumed that any incoming aircraft that hits a ''skid area'' in front of the cask storage area will bounce off that area without deformation or damage to the aircraft, and without slowing down at all, and impact the cask as if it had done so directly. This assumption has the effect of increasing the effective area for the cask storage area (and therefore the probability of the accident) by approximately 15%.[195] There is uncontroverted evidence in the record that an F-16 is so fragile that attempts to land it on the desert would cause

[192] *See* Tr. at 19,049-50 (Cornell), 18,967-69 (Thorne).

[193] *See* Tr. at 19,049-50 (Cornell), 18,967-69 (Thorne).

[194] A simplistic and therefore obviously crude estimate by Dr. Cornell would lead to a conservatism of a factor of five. *See* Tr. at 19,050-51 (Cornell).

[195] *See* Tr. at 19,019-21 (Thorne).

the craft to break up,[196] and therefore we find that there is no reason to believe that an F-16 impacting this ''skid area'' would behave as assumed. In fact, we find it much more likely that: (a) such an impact on the skid area would do significant damage to the incoming F-16, causing it to impact the cask in a very different configuration than that assumed in the purely radial impacts assumed in the computations, probably with material portions broken off; (b) such an impact on the skid area would cause material amounts of the incoming aircraft's momentum and energy to be transferred to the ground, making the resulting impact on the cask less damaging than a direct hit; and (c) it is unlikely that after such an impact on the ground the aircraft would rise off the skid area and impact the cask near the top at an angle of **x x x x x x x x x x x x x x x x x x** or less (just given the geometry). Therefore, we find that the impact area (and therefore the probability of an accident of this type) has been unrealistically and conservatively overestimated. While we are unable to quantify this conservatism, it is clearly a material amount, in the range of 15% conservatism (based upon the approximately 15% increase in impact area that was assumed).

Third, while in our prior hearings we refused to credit the Applicant's claim that there was a *near certainty* that a pilot would make the effort to avoid a crash into the facility, there was some evidence that pilots do make such efforts.[197] Thus, while we previously determined we could not assign a factor of 95% (i.e., a reduction in impact probability of 0.95) to the efforts of a pilot in redirecting the crashing plane away from the facility, we find that some material reduction could be assigned to such efforts. Therefore, the earlier decision — which gave no credit for such effort — introduces another material conservatism in the computations.

Fourth, we note that the computations that have been performed and presented to us all represent events that have been analyzed and that do not cause radiation release. Many other scenarios exist which are above the bounding case — and these have not been analyzed, and therefore may or may not cause such a release. For example, the Applicant has submitted some computations indicating that a

---

[196] *See* Tr. at 17,787 (Fly noting that the F-16 flight manual instructs a pilot to land only on prepared surfaces), 18,550-52 (Horstman describing how F-16s can only land on prepared surfaces because they are ''fragile'').

[197] During the last hearing, the Applicant sought to introduce the Pilot Avoidance, or ''*R,*'' factor to reflect the Applicant's belief that, when possible, Air Force pilots would almost always attempt to avoid striking the facility during an impeding crash. *See* LBP-03-4, 57 NRC at 90. To support its claim, the Applicant cited the F-16 flight manual which instructs pilots to avoid ''populated areas'' before ejecting if time permits. *Id.* at 96 n.34. While the Board agreed that pilots would make a good-faith effort to follow the F-16 manual, and noted that there were heroic instances where pilots sacrificed their own lives to save the lives of people on the ground, the Board ultimately concluded that the Applicant simply did not have enough evidence to establish that, *with near certainty it claims,* in an emergency situation pilots would send their crashing planes away from the Private Fuel Storage Facility. *See id.* at 99.

purely radial impact at **x x x x x x** (which is above the bounding case) does not cause the MPC to fail. Therefore, we find that there is also some conservatism contained in the selection of the particular bounding case that has been considered.

Furthermore, in light of the foregoing analyses and the evidence presented by the Applicant and the Staff, we find that the aircraft crash risk presented by the Canister Transfer Building is *de minimus.*

The end result is that we adopt the Applicant's prediction for probability of release — a result that was supported by the Staff's analysis — and find that the probability of a radiation release from an F-16 accident is below the one-in-a-million per year threshold. In reaching that result — which our dissenting colleague is unwilling to reach because of his concern that the result is too fraught with uncertain judgments, and too close to the pass/fail mark — we think, as we discuss more specifically below, that our colleague has given inappropriate consideration to the underlying technical merits. We also believe he has not adequately weighed the fact that the foregoing materially conservative assumptions were incorporated into the analyses, each of which caused the computed probability of radiation release from a crash to be higher than would have been computed by a realistic estimate, and leading to the logical conclusion that the probability computed by the Applicant (and agreed by the Staff) is likely to materially overestimate the probability (perhaps by an order of magnitude).

Thus, even though we find the computed probability of an MPC breach to be only slightly less than one in a million (the closeness to that threshold being a principal reason for our dissenting colleague's discomfort), a number of qualitative factors exist that assure us that the probability found by the Applicant and supported by the Staff is indeed an upper bound, and that efforts to more closely model reality would make it lower. We therefore believe that a more refined analysis would result in a lower (and perhaps materially lower) probability of release, and on that basis do not share our dissenting colleague's view that the closeness of the computed probability to the threshold is disqualifying to the Applicant's proposal.

In resolving this phase of the case in the Applicant's favor, we have given careful consideration to the discomfort we understand that our colleague Judge Lam has with several aspects of the technical information before us. We believe that, although the concerns he expresses might be theoretically valid in other contexts, the facts and opinions in the record make it clear that, properly considered, the matters he has raised have no application here.

First, we find that the theory advanced by a key State witness and emphasized in the dissent — that one should apply a tool (the ductility ratio), which is regularly used to assure that *structures* are designed conservatively, to determine when a *nonstructural* element will actually fail — was entirely discredited by the physical facts and expert testimony before us (as was the State's belated (and incorrect) suggestion that the ASME Code advises something similar). A

structural design criterion, good as it may be for that purpose, does not answer the different question being asked here, and the State simply misapprehended the portion of the ASME Code to which it made reference.

It may be that underlying our colleague's concerns regarding the integrity of the overpack is the possibility, about which he asked several questions during the hearing, that a crashing aircraft might penetrate a cask and push overpack materials into the canister inside. As we view the record, all the expert testimony and the computer simulations confirmed that — because the cask's ring of concrete is confined by inner and outer steel shells — if an aircraft were to hit the outer shell, the pressure and loads would be transmitted circumferentially (at the speed of sound) around the overpack concrete, spreading and reducing the localized loads on the inner liner and avoiding the result our colleague inquired about.

Furthermore, whereas the dissent focuses upon the structural characteristics of the overpack and argues that a ductility ratio should be used to assess its integrity and ability to resist the impact, the record clearly indicates two things: first, the carbon steel rings confining the concrete can withstand a great deal more strain before failure than the approximately 2% that the State's expert (and the dissent) would have us use (the evidence indicates that failure strain is on the order of 50% or more for such carbon steels); and secondly, although of materially lesser import, the overpack is not serving as a structural member and therefore would, in any event, not be the type of component to which a ductility ratio type test should be applied.

Second, the dissent is concerned about the uncertainty associated with the fact that the Air Force accident reports do not supply all the data about speed and angle of impact that we would like to have had. The dissent is correct that the set of crashes for which complete data are available is relatively small. But all the experts agree that, through standard, commonly used statistical techniques, extrapolations can be made (applying correlations appropriately derived from the crashes with complete data) from the valid data that *are* available for the other crashes, so as to allow expansion of the data set; this is recognized as an accurate way to take advantage of the additional information available from those other crashes. Indeed, the State's own expert did not dispute that principle, and this use of additional information was validated by the fact that the regression analysis achieved a correlation coefficient in excess of 90% (an unusually strong correlation, which the dissent dismisses as ''good but not perfect'').

Third, the dissent points to the expert disagreement about how to fit a curve to, and thus learn more from, the very few high-speed crashes reflected in the data set, especially because the State's statistical expert demonstrated that using a particular form of step function to fit those data would lead to a much higher probability of crash at high speed. But there are two ways to apply a step function, and if the State's expert had used the alternative method to fit the data (i.e., if he had the steps start, rather than end, at a data point, a fit that we believe is a better

representation of the data), the result would have been a significantly lower (rather than higher) probability of breaching impact than that obtained by the Applicant and the Staff. Even more importantly, because phenomena at the macroscopic level are not ''quantized,'' we do not agree that a step function was appropriate at all — the proper way to ''fit'' data on real-world events is to draw a curve through them, which is how the Applicant's and the Staff's experts proceeded.

In sum, we think no concern expressed by our dissenting colleague has the technical support in the record that would transform his theories into a finding of a higher radiation release probability for the situation at issue here. In addition, the dissent does not appear to give any weight to the large conservatisms that are built into the analyses — conservatisms that indicate to us that these computations overestimate the probability of an MPC rupture by a factor of five or even more. In this regard, in setting the standard for this case, the Commission made clear the legitimacy of evaluating and weighing conservatisms whose impact can be reasonably estimated, and in fact indicated that in such circumstances the threshold probability for a credible accident might be even further increased. *See* CLI-01-22, 54 NRC at 260 (citing the steps a Licensing Board took in that regard in *Consumers Power Co.* (Big Rock Point Plant), LBP-84-32, 20 NRC 601, 639-52 (1984)).

For the foregoing reasons, we remain unpersuaded by our colleague's concerns.

In light of all of these conservatisms in the computations and methodology, and based upon the foregoing review, we find that the accidents at issue are not credible and therefore need not be included in the design basis for this facility.

III. CONCLUSIONS OF LAW AND CONCLUSION OF THE PROCEEDING

This Licensing Board has considered all of the material presented by the parties on Contention Utah K (''credible accidents'') . Based upon our review of the evidentiary record relative to this contention and of the two sets (initial and reply) of proposed findings of fact and conclusions of law submitted by the parties, the Board has decided the matters in controversy concerning this contention in the fashion delineated in the views set forth above — which we believe are supported by a preponderance of the reliable, material, and probative evidence in the record, and are in accord with applicable laws and regulations.

This Initial Decision does not attempt to address explicitly all aspects of the parties' proposed findings. To the extent a particular proposal was not so addressed, it is either because we have determined that to do so was unnecessary to our decision, or because our reasoning addresses it implicitly.

In accordance with the views previously expressed herein, the Board reaches the following ultimate legal conclusions in favor of the Applicant Private Fuel Storage, L.L.C. (and the NRC Staff):

1. The evidence establishes that the probability is less than one in a million per year that there will be an accidental crash into the PFS site by an F-16 from Hill Air Force Base that has the consequence of breaching a multipurpose canister containing spent nuclear fuel and thereby causing a radiological release.

2. Because of that low probability, an accidentally crashing F-16 impacting a cask while traveling beyond the structurally related ''bounding speed and angle'' utilized to determine that probability is not a ''credible accident'' as defined in agency regulations.

3. The proposed PFS facility need not, therefore, be designed to withstand such an accident and no inquiry need be made into the radiological consequences of such an accident.

Accordingly, for the reasons set forth herein, *we determine that the Applicant has met its burden with respect to Contention Utah K and we rule in its favor thereon*: Contention Utah K is RESOLVED on the merits in favor of the Applicant Private Fuel Storage, L.L.C. (and the NRC Staff) and against the Intervenor State of Utah.

All the Intervenors' contentions admitted into the proceeding have now been resolved, whether by voluntary withdrawal, summary disposition, negotiated settlement, Board decision following an evidentiary hearing, or other means. There has been no ultimate resolution of an admitted contention of a nature that would preclude issuance of the license requested by the Applicant and, with the conclusion of substantive Licensing Board proceedings, the question of whether to issue a license is now properly before the Commission for determination pursuant to 10 C.F.R. § 2.764(c). *See also* LBP-05-5, 61 NRC at 126-27.

We close with three additional thoughts (in which Judge Lam joins):

A. Scope of Decision

In its recent decision on the length of the required Yucca Mountain isolation standard, the United States Court of Appeals for the D.C. Circuit spoke eloquently about the magnitude and importance of the national debate about how to address the presence at reactor sites of spent nuclear fuel. *See Nuclear Energy Institute v. Environmental Protection Agency,* 373 F.3d 1251, 1257, 1258 (2004):

> Having the capacity to outlast human civilization as we know it and the potential to devastate public health and the environment, nuclear waste has vexed scientists, Congress, and regulatory agencies for the last half-century. After rejecting disposal options ranging from burying nuclear waste in polar ice caps to rocketing it to the sun, the scientific consensus has settled on deep geologic burial as the safest way

> to isolate this toxic material in perpetuity. Following years of legislative wrangling and agency deliberation, the political consensus has now selected Yucca Mountain, Nevada as the nation's nuclear waste disposal site.
>
> * * * *
>
> Radioactive waste and its harmful consequences persist for time spans seemingly beyond human comprehension. . . . As of 2003, nuclear reactors in the United States had generated approximately 49,000 metric tons of spent nuclear fuel. Most of this waste is currently stored at reactor sites across the country [citations omitted].

In issuing today's decision, we must stress that our rulings do not purport to address the questions raised by the debate to which the D.C. Circuit referred. Put another way, we do not sit, and it is not our role, to determine the optimum method by which the Nation should manage spent nuclear fuel.

Rather, what is before us is a specific proposal by the Applicant for making an away-from-reactor temporary spent fuel storage facility available for use by the nuclear utility industry. Our role has been only to pass judgment on the series of safety and environmental challenges to that proposal — not to determine the wisest course of action for the country in terms of what should be done with spent nuclear fuel in either the short or the long term. On that score, the Commission has already indicated herein (CLI-04-4, 59 NRC at 40) that a matter like that borders on being a ''political'' question (in the sense not of partisan party politics, but of policy choices, about competing societal values, that are for our elected and appointed representatives to make) — and, as such, is a question that the Commission ''*do[es] not believe that NEPA charges . . . the Board, in its hearing process, with answering . . . .*''

The resolution of that political question must also factor in how spent fuel can be best protected from deliberate (e.g., terrorist) attacks. Especially to the extent that such antiterrorism factors are concerned, that debate is even more expressly outside our jurisdiction, being reserved to the Commission for consideration *outside the adjudicatory process* (*see* pp. 655-56, n.33, above).

In short, all determinations on overarching matters like those are for others to make. Debates on such matters will have to take place in forums other than ours.

B. Fairness to Parties

In its decision a few months ago upholding a district court's rejection, on preemption grounds, of a series of laws enacted by the Utah legislature and intended to block this project, the United States Court of Appeals for the Tenth Circuit expressed the hope that the State would receive fair treatment in the federal nuclear regulatory process that the Court recognized as paramount:

> [w]e also note that many of the concerns that Utah has attempted to address through the challenged statutes have been considered in the extensive regulatory proceedings before the NRC . . . . We are hopeful that Utah's concerns — and those of any state facing this issue in the future — will receive fair and full consideration there.

Skull Valley Band of Goshute Indians v. Nielson, 376 F.3d 1223, 1254 (2004).

We suppose that, after Commission review of our decision today, the losing party will appeal, and the 10th Circuit (or its counterpart, the D.C. Circuit) will have the opportunity to determine whether the hope expressed above was realized. The Court will be able to measure our decision against the underlying record that the parties compiled and that our rulings and our questions shaped.

Whether the agency's decision, and the manner in which the record was shaped, is ultimately upheld or not, we would expect the reviewing Court to come to the conclusion that the State, and the other parties, were, to the best of our ability, treated fairly, as the 10th Circuit had hoped. According them that fundamental right has been a paramount concern of ours. *See* Tr. at 15,208-10, 19,701-02; *see also United States v. Steel Tank Barge H 1651,* 272 F. Supp. 658, 659 n.1 (E.D. La. 1967), *referring to* John M. Kelley, *Audi Alteram Partem,* 9 Natural Law Forum 103 (1964), authorities that we also cited 3 years ago. *See* LBP-02-8, 55 NRC 171, 201 n.60 (2002).

C. Consideration of Settlement

This proceeding has been hard and long fought, by parties fully committed to the justice of their cause. The Applicant and the State have along the way, however, settled several varied matters (e.g., those relating to (1) bird habitat [*before* the first aircraft trial, *see* Joint Motion To Dismiss Contention Utah DD — Ecology and Species (Mar. 15, 2002); Prehearing Memorandum: Summary and Order (Mar. 22, 2002), at 5]; (2) sewage disposal [*during* the first aircraft trial, *see* p. 708, below, and Joint Motion To Dismiss Contention O — Hydrology (June 18, 2002)]; and (3) cask design [*after* the first aircraft trial, *see* pp. 710-11, n.12, below]). Those settlements were built essentially on the principle that, if the license application were to be approved, a safer or a more benign facility was in the interest of all concerned.

While the evidence on the major safety issues remained to be considered, however, there appeared to be no possibility of settling the overall proceeding. Now that all the evidence has been taken and all our decisions have been rendered, the likely outcomes are easier to see. The Applicant is in position to obtain its license (*see* p. 696, above) and to hold on to it unless the State is successful, at the Commission level or in the federal courts, in overturning — on either procedural or substantive grounds — determinations resulting from the past 7+ years' work.

Put another way, with aircraft crash impact probabilities now ascertained, each party can more readily assess the likelihood that it will achieve its long-term objectives. The Applicant seems to have qualified to receive its license in the short term, but could lose it in the long term. The State will have to count on demonstrating to the Commission or the federal courts error in some important part of the proceeding to block the license permanently.

Commission policy strongly favors settlements, and settlements sometimes are possible in unlikely circumstances. *See generally CFC Logistics*, LBP-05-1, 61 NRC 45 (2005) (in which both members of today's majority were involved in the achievement of a difficult settlement, albeit one that involved a much less consequential matter). The accidental aircraft crash issue was the most difficult and most closely contested one in this entire proceeding. The outcome is a close one, as evidenced by our rationale and by our split vote. Close cases are prime candidates for settlement.

The parties may thus want to consider whether an overall resolution might be obtained through, for example, (1) the Applicant agreeing to further enhance the safety of the facility against potential aircraft crashes, such as by the construction of a berm (*see* Tr. at 15,580-81) or of a pole-and-cable system (or a combination thereof) that would protect the casks from aircraft approaching the site in horizontal flight on the predominant azimuthal flight path; in return for (2) the State's dropping all appeals and accepting the existence of the facility as so modified. Such a settlement would truly have come about as a direct result of the State's efforts to protect the safety of its citizens through the hearing process, and would in fact be in furtherance of that end, as well as of the Applicant's interest in further protecting its facility from accidental — or appellate — harm.

Absent a further Commission directive, the Board's substantive role in the case is complete (the Farrar-chaired Board does intend later to work with the parties administratively to prepare a *Redacted Version* of this Decision, and the Bollwerk-chaired Board is carrying out a similar task related to the proprietary aspects of the financial qualifications issue). For the final time, then, we thank the parties for their professional, high-quality presentations and participation, while also commending to their attention our thoughts about possible settlement.

Pursuant to 10 C.F.R. § 2.760(a), this Final Partial Initial Decision will constitute the FINAL ACTION of the Commission within forty (40) days of this date unless a petition for review is filed in accordance with 10 C.F.R. § 2.786(b), or the Commission directs otherwise.

Within fifteen (15) days after service of this Final Partial Initial Decision (which shall be considered to have been served by regular mail for the purpose of calculating that date), any party may file a PETITION FOR REVIEW with the Commission on the grounds specified in 10 C.F.R. § 2.786(b)(4). Any such

petition for review should also cover any interlocutory rulings of ours that were not previously appealable either by NRC Rule or by Commission Order. The filing of a petition for review is mandatory in order for a party to have exhausted its administrative remedies before seeking judicial review. 10 C.F.R. § 2.786(b)(1).

Within ten (10) days after service of a petition for review, any party to the proceeding may file an ANSWER supporting or opposing Commission review. 10 C.F.R. § 2.786(b)(3).

The petition for review and any answers shall conform to the requirements of 10 C.F.R. § 2.786(b)(2)-(3).

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Michael C. Farrar, Chairman
ADMINISTRATIVE JUDGE

Peter S. Lam*
ADMINISTRATIVE JUDGE

Paul B. Abramson
ADMINISTRATIVE JUDGE

Rockville, Maryland
February 24, 2005

Copies of the *Public Version* of this Initial Decision were sent this date by Internet e-mail transmission to counsel for: (1) Applicant PFS; (2) Intervenors Southern Utah Wilderness Alliance, Skull Valley Band of Goshute Indians, OGD, Confederated Tribes of the Goshute Reservation, and the State of Utah; and (3) the NRC Staff.

So that all parties receive it at approximately the same time, hard copies of the full *Safeguards Version* are being sent by overnight delivery to the State of Utah and to the Applicant PFS, and will be hand delivered tomorrow morning at 10:00 a.m. EST to the NRC Staff.

*As indicated at the outset, Judge Lam dissents from the result reached in the foregoing Initial Decision, and is therefore not signing it. His signed dissent follows, on pages 701-05.

Opinion of Judge Lam, Dissenting

I. INTRODUCTION

I dissent from the majority opinion for the basic reason that the proposed PFS facility has not been demonstrated to meet an established safety standard for accidental aircraft crash hazards. This safety standard, which was established in an earlier Board decision[1] and subsequently affirmed by the Commission,[2] requires that the PFS facility be designed to withstand aircraft crashes if the annual probability of such crashes exceeds one in one million (1×10^{-6} per year). The Board previously ruled in a partial initial decision[3] that the proposed PFS facility did not meet the 10^{-6} per year safety standard, and accordingly the Board did not approve the PFS license application at that time.

In this current proceeding, the Applicant has performed an extensive probability analysis and a structural analysis to rehabilitate its license application. As explained below, the Applicant's probability and structural analyses both suffer from major uncertainties. These uncertainties fundamentally undermine the validity of the analyses. Accordingly, I would hold that the Applicant has not met its burden of demonstrating that it has satisfied the 10^{-6} per year safety standard.

II. DISCUSSION

A. Uncertainties in the Applicant's Probability Analysis

Three interrelated issues contribute significantly to the uncertainties in the Applicant's probability analysis: (1) the scarcity of F-16 crash data; (2) the quality of the F-16 crash data, as expanded by regression analysis; and (3) the sensitivity of the complementary cumulative distribution function (CCDF) to different fitting methods, and its large impact on the final calculated crash probability.

Issue 1: Scarcity of Documented F-16 Crash Data

First, there is no dispute by the parties that the data on F-16 crashes in general, and on crash impact speed and angle in particular, are sparse. Only fifty-seven F-16 accident reports were deemed suitable for analysis by the Applicant, and only fifteen reports have documented impact speed. Even if Utah's challenges to

[1] LBP-01-19, 53 NRC 416 (2001).
[2] CLI-01-22, 54 NRC 255 (2001).
[3] LBP-03-4, 57 NRC 69 (2003).

the suitability of some of these reports were entirely disregarded, these reports collectively represent a small sample.

The uncertainties inherent in using a small data set were explored by the Board in this proceeding. The Board requested that the Applicant perform its analysis using only documented crash data from the fifteen reports that contain documented impact speed to assess how sensitive the results might be to such a small data set. The Applicant's results[4] indicate that using such a small set of data would imply a crash probability exceeding the 10^{-6} per year safety standard, but that the standard errors of the estimate would be unreliably large. This of course is no surprise, as it only confirms the obvious: the use of a small data set leads to large uncertainties.

Issue 2: Quality of Expanded F-16 Crash Data

The scarcity of data, the Applicant asserts, necessitates the expansion of the small data set of documented impact speeds to a larger set of estimated impact speeds by using regression analysis. The uncertainties inherent in using a small data set are now compounded by the uncertainties introduced by the regression analysis. Note that the correlation coefficients in the Applicant's regression analysis are above 0.9, but not quite 1.0, indicating there is a good, but not perfect, fit of data. This implies that additional uncertainties are now being introduced by the regression analysis. The Applicant advocates the theory that the expanded set is as good as the original set, while Utah argues that the expanded set may not adequately represent the actual F-16 crash parameters. The truth probably lies somewhere between these two opposing positions.

The uncertainties inherent in the use of a small set of F-16 crash data, compounded by additional uncertainties introduced by regression analysis, must not be ignored for two important reasons. First, the Applicant's calculated crash probability (0.74×10^{-6} per year), even if assumed to be accurate and reliable (an assumption Utah vigorously challenges), leaves scant margin for error in meeting the 10^{-6} per year safety standard. Second, the Applicant's calculated crash probability is sensitive to small uncertainties introduced by how crash data are manipulated (see discussion of the CCDF curve, below).

Issue 3: Sensitivity of CCDF Curve to Fitting

The uncertainty raised by the third issue, namely how different methods of fitting the CCDF curve in the region of high impact speeds affect the final

[4] *See* State Exh. 278, Summary Table for Board's Requested Calculation, by PFS expert Dr. Cornell, August 20, 2004. *See also* Tr. 18,078-102 (Cornell explaining exhibit).

calculated crash probability, is also critical. Utah's expert Dr. Thorne, in State Exhibit 285,[5] indicates that by using actual discrete values of the CCDF for three particular impact speeds higher than the Applicant's threshold value, the annual probability of an F-16 crash breaching a spent fuel storage cask is 0.506×10^{-6} per year. This represents a significant increase from the Applicant's value of 0.375×10^{-6} per year, which is obtained by fitting the CCDF curve into a smooth curve between the aforementioned impact speeds.[6] This increase alone would bring the accidental F-16 crash probability to slightly above 1×10^{-6} per year, hence failing the 10^{-6} per year safety standard. This observation of CCDF sensitivity is important because it demonstrates quantitatively that the annual probability outcome is sensitive to a seemingly small uncertainty introduced by how crash data are manipulated.

B. Uncertainties in the Applicant's Structural Analysis

A singularly important but unresolved dispute with respect to the Applicant's structural analysis is the Applicant's declination to adopt the DOE ductility ratio standard[7] as the failure criterion for the spent fuel storage cask. The DOE ductility ratio standard was developed by a group of experts, assembled by the Department of Energy, to protect facilities containing radioactive or chemical materials from the hazards of an accidental aircraft crash. Experts from the Defense Nuclear Agency, Federal Aviation Administration, and Environmental Protection Agency participated in that development process, with an NRC expert having observer status.

The evidence provided by Utah persuasively shows that the concrete overpack of the spent fuel storage cask is exactly the type of structure (concrete structure with carbon steel shells) to which the DOE ductility ratio should be applied as a governing failure criterion. When, as a result of an F-16 crash, the strain in the carbon steel shells of the concrete overpack reaches the failure strain set by the DOE ductility ratio standard, the overpack should be considered to have failed in performing its intended function. All parties' analyses in the evidentiary record show that the strain in the overpack's carbon steel shells significantly exceeds the DOE ductility ratio failure strain. Therefore the overpack is expected to fail in an F-16 crash scenario.

How this overpack failure would occur under the DOE ductility ratio standard, and how it would subsequently impact the stainless steel multipurpose canister, has not been identified in this proceeding, despite numerous inquiries by Board

---

[5] State Exh. 285, Additional Probability Analyses, Sept. 13, 2004.

[6] *See* Tr. at 18,869-83 (Thorne explaining exhibit).

[7] *See* State Exh. 254, United States Department of Energy Standard (DOE-STD-3014-96) *Accident Analysis for Aircraft Crash into Hazardous Facilities* (Oct.1996).

members. This lack of clarity about how the overpack fails under the DOE ductility ratio standard is not a valid basis for asserting that the overpack would not fail. Nor is it a valid basis for asserting that the DOE ductility ratio standard does not apply to the overpack.

The caution urged by Utah's expert Dr. Sozen in advocating the adoption of the DOE ductility ratio standard for both the carbon steel shells of the overpack and the stainless steel canister should be heeded. As Dr. Sozen testified in this proceeding,[8] there are numerous uncertainties associated with how a structure would fail under aircraft crash impact. These uncertainties include: uncertain loading; the actual shape of the stress/strain curve; presence of residual stress; large strain gradients; presence of welds; potential fabrication and installation errors; and high strain rates. To appropriately deal with these uncertainties, the failure strain should be set as close as reasonable to the yield strain, namely to stay close to the elastic range. This rationale is the underlying premise of the DOE ductility ratio standard. Its adoption in this proceeding as the governing failure criterion for the concrete overpack, perhaps even for the stainless steel multipurpose canister as urged by Utah, would have been prudent.[9]

The use of the DOE ductility ratio standard is also bolstered by the latest theory advanced by Utah regarding how Appendix F to section III of the ASME code should be applied to determine the failure strain of the multipurpose canister.[10] Here, Utah argues persuasively that using material properties for stainless steel provided by the ASME code, taking into account neither strain hardening nor transformation of engineering strain to true strain, would predict a failure strain of less than 10%. This 10% value is significantly less (by a factor of about four) than the value the Applicant used in its analysis for failure strain in the stainless steel multipurpose canister.

III. CONCLUSION

Simply put, in contrast to the demonstrated robust safety margin against design seismic events found in our earlier decision LBP-03-8,[11] the proposed PFS facility

---

[8] *See* Tr. at 16,243-44 (Sozen).

[9] I do not join in the majority's belief that the DOE ductility ratio standard is merely a design tool, and that a significant violation of that standard will pose no threat to the concrete overpack or the stainless steel canister. However, even if the DOE ductility ratio failure strain were merely a design failure strain, prudent safety practice (and the position advocated by Utah) would still require preventing the strain in the overpack and the canister from greatly exceeding the ductility ratio failure strain. To greatly exceed a design failure strain is to erode whatever conservatism is incorporated in the design.

[10] *See* State of Utah's Reply Findings of Fact (Nov. 19, 2004) at 15-25; State of Utah's Response to Board Order Directing Clarification of Record (Dec. 8, 2004).

[11] 57 NRC 293 (2003).

does not currently have a demonstrated adequate safety margin against accidental aircraft crashes. Even if the Applicant were to overcome all of the aforementioned uncertainties in its analyses, the proffered probability of 0.74×10^{-6} per year of aircraft crashes leading to unacceptable consequences has a margin of only 26% when measured against the safety standard of 1×10^{-6} per year. This 26% margin rapidly disappears when one or more of the aforementioned uncertainties are considered. For example, if either the documented impact speeds alone were used or the DOE ductility ratio standard were adopted as the concrete overpack and multipurpose canister failure criterion, the proposed PFS facility would immediately fail the 10^{-6} per year safety standard.

This lack of adequate safety margin is a direct manifestation of the fundamentally difficult situation of the proposed PFS site: 4000 spent fuel storage casks sitting in the flight corridor of some 7000 F-16 flights a year. The venerable four-factor aircraft crash formula in NUREG-0800,[12] which has been used for years to steer reactor license applicants away from difficult sites facing significant aircraft hazards, has already indicated once[13] that the proposed PFS site fails to meet the safety standard of 10^{-6} per year.

The Applicant's current analyses, which are fundamentally undermined by large inherent uncertainties and narrow safety margins, should not be relied upon to demonstrate the safety of the proposed site. More needs to be done. The Applicant should demonstrate that a breached spent fuel storage cask would not result in a site-boundary radioactive dose exceeding regulatory limits, or should implement other remedies such as the installation of physical barriers. Such a decisive demonstration, or the implementation of genuine remedies, would ensure the adequate protection of public health and safety.

Peter S. Lam
ADMINISTRATIVE JUDGE

[12] NUREG-0800, ''Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants,'' Rev. 2 (July 1981).

[13] *See* LBP-03-4, 57 NRC 69.

APPENDIX TO LICENSING BOARD DECISION OF FEBRUARY 24, 2005 IN PRIVATE FUEL STORAGE PROCEEDING

In this Appendix, all three Board members provide additional information about both the earliest and the latest stages of the case.

In Part A, we set out the procedural history of those aspects of the proceeding not related to the one remaining contention, and cover as well certain principles that govern our proceedings. This should be of assistance to those readers who have not previously followed the PFS proceeding.

In Part B, we explain why it has been nearly 2 years since our decision on the first phase of the hearing on that contention, and detail what has been accomplished during that period. In this fashion, we have completed the report that the Commission sought from us if the proceeding took longer to conclude than it expected.

A. Early History

1. The PFS Application

The PFS consortium of nuclear-powered electric generating companies filed its application with the NRC on June 20, 1997, seeking a temporary solution to the industry's perceived need to take action with respect to the growing quantities of spent nuclear fuel accumulating at reactor sites. The uncertainty and delays being generated by the Department of Energy's inability to fulfill its mandate to take that spent fuel from the utilities (such as by moving it to the proposed permanent underground repository at Yucca Mountain in Nevada) led PFS to seek NRC approval to build a facility for temporary aboveground storage of that spent fuel. The understanding — which we discussed in another decision issued earlier today (*see* LBP-05-5, above, 61 NRC at 110-11) — is that the PFS facility would store the spent fuel rods, currently housed at nuclear reactor sites around the country, until they could be moved directly to the permanent repository.[1]

The Applicant seeks to store the spent fuel on the Reservation of the Skull Valley Band of Goshute Indians, within the 99-acre secured portion of a larger site being leased from the Band for that purpose. While the Reservation is within the boundaries of the State of Utah, the special sovereign status of recognized Indian Tribes essentially protects the proposed activity from being subject to the State's ordinary regulatory jurisdiction. As mentioned earlier, then, one way the

[1] At this writing, it appears that DOE's application to the NRC for approval of the Yucca Mountain facility will not be filed any earlier than the end of 2005.

State has expressed its concerns over, and objections to, the proposal was by bringing its safety and environmental contentions to us for resolution.

The PFS application was reviewed by the NRC Staff. That process consumed over 3 years, during which time the Staff made any number of requests for additional information, and the Applicant revised its application nineteen times. The NRC Staff approved the application on September 29, 2000.[2]

2. The Hearing Opportunity

Early on during the Staff review of the application, the NRC published in the *Federal Register* the July 1997 notice of hearing. The notice stated that anyone opposed to the issuance of the license could request a hearing before an Atomic Safety and Licensing Board.

The Licensing Board is an independent adjudicatory branch of the NRC, whose judges are appointed,[3] and whose decisions are reviewed, by the Commissioners who head the NRC.[4] The Board's existence provides individuals and organizations who oppose any licensing action the NRC Staff proposes to take, or has taken, the opportunity to present the concerns they have to an independent, quasi-judicial forum within the agency.

As mentioned previously, several parties took that opportunity and presented some 125 issues that they wished to have adjudicated before the Board. The Board admitted those parties whom it determined had demonstrated their legal ''standing'' to participate and who had proffered admissible contentions.

3. The Parties' Contentions

Several Petitioners sought to oppose the PFS facility.[5] As mentioned above, the Petitioners submitted some 125 contentions challenging the proposed facility. The number of contentions was reduced as the proceeding progressed. Many were dismissed initially on procedural grounds, such as not being filed within the

---

[2] LBP-03-4, 57 NRC at 82. By the time of our original 2002 hearing on the State's ''credible accidents'' contention, the application had been amended four more times.

[3] Although the Commissioners appoint judges to the overall Licensing Board *Panel,* it is generally the Panel's Chief Judge who assigns judges to particular Board *proceedings.*

[4] LBP-03-4, 57 NRC at 92 n.28. Our decisions are reviewable by the Commissioners, with whom we have no interaction other than through our decisions and their formal, on the record, review thereof.

[5] Along with the State of Utah, the Southern Utah Wilderness Alliance also presented several contentions, one of which went to evidentiary hearing. Other Petitioners who participated to a lesser extent included the Skull Valley Band of Goshute Indians, Ohngo Gaudadeh Devia, Confederated Tribes of the Goshute Reservation, David Pete, Castle Rock Land and Livestock, Skull Valley Company, and Ensign Ranches of Utah. *See* LBP-98-7, 47 NRC 142, 156-57 (1998).

proper time frame or for being outside the jurisdiction of the Board. Other issues, though appearing appropriate for consideration by the Board, were later decided on legal grounds, through ''summary disposition'' procedures, as they did not involve a significant factual dispute that would require evidentiary presentations. Some matters were settled. In other instances, a party that introduced a contention later withdrew it after determining that it no longer wished to litigate the issue.

The several contentions that remained were the subject of full evidentiary hearings.[6] In that regard, the 45 days of evidentiary hearings conducted in 2002 on aircraft crashes, seismic standards, and environmental/wilderness values (as well as on a hydrological issue that was settled in mid-trial (*see* 57 NRC at 81 n.6; p. 698, above)) were all open to the public, with the vast majority of those sessions held in Salt Lake City.

We have commented previously on the concern, sometimes expressed by observers of our hearings, as to the NRC Staff's appearing to be too much on the side of an applicant. LBP-03-4, 57 NRC at 82, 83-84. As this case illustrates, that alignment occurs only after the Staff has conducted its lengthy review and the applicant has responded by making changes that the Staff has insisted upon. The Staff's support of an applicant's position at the hearing does not, then, establish that the Staff has failed to carry out its duty to protect the public interest.

While the Staff's regulatory review plays an important role in the application process, and the presentation of its position based thereon is an important aspect of the hearing process, we insist upon treating the NRC Staff (with whom we have no extrajudicial organizational interaction) the same as any other party at the hearing. In particular, we subject the Staff's evidence to the same scrutiny as that of the other parties. *See* LBP-03-4, 57 NRC at 140 n.124 & accompanying text; *see also* note 13, below.

B. Recent Timing

In deferring its review of our March 2003 decision on aircraft crash probabilities, the Commission indicted its expectation that we would be able to reach a decision on the subsequent ''consequences'' phase by the end of that year. Today's decision comes nearly 14 months after that target.

---

[6] The Bollwerk-chaired Board (*see* p. 650, n.19, above) conducted an evidentiary hearing in 2000 on the merits of several contentions, including financial assurance and emergency planning. Some of that Board's partial initial decisions include: Emergency Planning, LBP-00-35, 52 NRC 364 (2000), *petition for review denied,* CLI-01-9, 53 NRC 232 (2001); Financial Assurance, LBP-05-21, 62 NRC 248 (2003); Decommissioning, LBP-05-22, 62 NRC 328 (2003).

In addition to hearing the aircraft crash matter, the Farrar-chaired Board took evidence and issued partial initial decisions on Geotechnical Issues, LBP-03-8, 57 NRC 293 (2003), *petition for review denied,* CLI-03-8, 58 NRC 11 (2003); and Rail-Line Alternatives, LBP-03-30, 58 NRC 454 (2003).

If someone were to ask ''what went wrong,'' the simple answer would be:

Nothing. Analysis of the progress of this case over the past 2 years illustrates that: (1) the Staff's regulatory review process functioned as it should; (2) the Applicant used large amounts of time to refine the justifications for its application; and (3) during the periods that the process was under the Board's control, the diligence of all parties and our case management efforts kept the adjudicatory process moving on schedule.

This proceeding was convened to determine the safety of a proposal that could result in the Nation's stockpile of spent nuclear fuel resting aboveground, at an away-from-reactor site, for a very long time.[7] The current ''consequences'' phase involves a complicated and significant question that was a direct outcome of the Applicant's choice of a site about which safety concerns were triggered by the overflight of 7000 F-16s a year.[8] As the parties proceeded with this phase, and as is not uncommon in complex proceedings like this one,[9] the NRC Staff found the Applicant's submittals wanting, and therefore pursued clarification through a number of requests for additional information (RAIs). Because of these apparent shortcomings in the Applicant's submittals, additional (iterative) work was required to get the application to a stage where the Staff could support it. Those two parties' needs for more time to ''get it right'' led to the periodic (temporary) suspension of the formal adjudicatory process at the Applicant's request; all agreed that no purpose would have been served by wasting time (and effort) on adjudicating an incomplete or unsupportable application.

---

[7] That period was initially thought to be 20 years. The State unsuccessfully challenged its extension to 40 years. *See* CLI-04-22, 60 NRC 125, 148-50 (2004). Recently, the Commission approved a 40-year extension for onsite aboveground cask storage at one reactor site (*see* NRC News, No. 04-156, ''NRC Approves 40-Year License Renewal for Independent Spent Fuel Storage Installation at Surry Nuclear Plant'' (Dec. 8, 2004)). That decision indicated a continued belief that spent fuel could be stored in dry casks for at least 100 years without significant environmental impact because the additional years do not pose any obvious ''aging-type'' safety issues. Our decision today, then, could conceivably lead ultimately to very lengthy storage of spent nuclear fuel in Skull Valley.

[8] In other words, the issue we decide today was brought on by the Applicant's own election to move forward with a site that could readily be seen — with a look upward and a look to the standard screening formula — to be a problematic one.

[9] *See Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-01-13, 53 NRC 478, 484-86 (2001), where the Commission set forth an aggressive adjudication schedule, which the Board was prepared to implement (*see* unpublished Memorandum and Order (setting Phase I schedule) (July 17, 2001)). The Applicant notified the Board on January 24, 2002, however, that it needed to amend its Construction Authorization Request and Environmental Report. *The Applicant's changes, and the Staff's review of those changes, ultimately led to a 2-year scheduling delay beyond the Board's control.*

In various procedural orders,[10] we explained each resulting alteration of the original schedule we had set out for the parties, a schedule that had initially targeted a year-end 2003 decision and had set forth a roadmap for achieving that goal.[11] But all those scattered thoughts are worth recounting in one place, because together they demonstrate how additional time was necessary to enable the NRC's licensing process to follow its design course, and how this process eventually benefitted the public interest (and, as will be seen, even the interests of the Applicant, who, not untypically, indicated at every possible juncture a strong preference for agency rulings that come sooner rather than later).

1. We begin by observing that the agency's regulatory process can accommodate the evolving needs of an applicant to enhance its proposal from a safety standpoint,[12] or to develop a better information base to demonstrate its safety. As

---

[10] See the following unpublished prehearing orders in which we dealt with scheduling:

Scheduling Memorandum and Report (July 31, 2003);

Scheduling Memorandum and Report (Aug. 15, 2003);

Scheduling Order and Report (Sept. 9, 2003);

Order Suspending Schedule (Oct. 10, 2003);

Order Convening Conference Call (Regarding Contention Utah TT and Hearing Schedule) (Feb. 5, 2004);

Order Summarizing Prehearing Conference Call (Regarding Contention Utah TT, Hearing Schedule, and Related Matters) (Feb. 19, 2004);

Order Summarizing Prehearing Conference Rulings (Regarding Contention Utah TT and Hearing Schedule) (Feb. 27, 2004);

Memorandum Concerning Scheduling (Apr. 15, 2004);

Scheduling Order (Apr. 23, 2004);

Memorandum of Conference Call (June 2, 2004);

Memorandum and Order (Summarizing June 15 and July 1 Prehearing Conference Call) (July 14, 2004);

Memorandum and Order (Summarizing July 15 Conference Call) (July 22, 2004).

[11] *See* June 25, 2003 transcript of Conference Call, where we built on the parties' June 19, 2003 ''Joint Report on Proposed Schedule,'' at 9-10, to set forth a schedule (referred to in our July 31, 2003 order, above) that would have met the Commission's year-end decisional time frame; *see also* the schedule that superseded it (set out at p. 6 of our Sept. 9, 2003 order, above) that, even with the slippage encountered by then — attributable to the Applicant's delay in filing expert reports, filing more reports than expected, and need to evaluate the timing of its response to Staff RAIs — would have led to a decision in mid-April of last year. That second schedule was itself suspended at the Applicant's behest a month later for what proved to be a very lengthy period.

[12] For example, in the midst of the preparation for the consequences hearing, *the Staff's questions led the Applicant to discover an accident-related shortcoming in an aspect of cask design.* The Applicant devised a solution and amended its license application to reflect the change (its Safeguards aspects preclude our detailing it here). This change, in turn, prompted the State to file on January 9, 2004, a new contention, denominated Utah TT, challenging the change as creating a different kind of problem,

(Continued)

that preparatory process unfolds, however, the time *consumed by an applicant's preparation* cannot necessarily be attributed to the adjudicatory process or to the Board's oversight of that process. Moreover, all involved recognize that we have no supervisory power whatsoever over the *Staff's performance of its regulatory review activities. See Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-6, 59 NRC 62, 74 (2004) (citing, *e.g., Curators of the University of Missouri* (TRUMP-S Project), CLI-95-1, 41 NRC 71, 121 (1995)).

Accordingly, it is paramount to recognize that the schedule for the adjudicatory process is not wholly, and sometimes not even largely, within the Board's management and control. In this instance and in others, one should expect a not insignificant portion of the time to be consumed by the interactions between the applicant and the NRC Staff, as the applicant polishes the application and its supporting data to enable the Staff to accept its approach and conclusions.

Here, early on the Applicant needed additional time to provide its initial round of expert reports setting forth its position on the ''consequences'' issue, and then actually proffered more reports than were anticipated. This, in addition to the delays in generating the reports themselves, resulted in additional time for responsive filings.

At the same time, perhaps to ensure there was no possibility of the types of shortcomings identified in the positions it advanced before us in the course of the first aircraft hearing,[13] the Staff, apparently finding the application to be falling short of what was needed for its approval, made a concerted effort to pursue additional information prior to the hearing. Thus, it presented the Applicant with a series of RAIs, the second set of which resulted in *the proceeding going into abeyance for an additional period of over 4 months — at the Applicant's behest* — while the Applicant developed its answers.

The course followed here demonstrates how the process sometimes works. To fulfill their respective roles, the Applicant must submit a thorough and compelling application demonstrating that it meets the regulatory requirements, and the Staff must diligently seek out thorough answers to its concerns. In such a process, it should be expected that, as was the case here, the applicant will, of necessity, expend considerable effort and consume considerable time and resources in the course of responding (and perhaps in revising its application).

---

this one of an operational nature. At our suggestion, the parties were able to avoid litigating the new contention by settling the underlying dispute, by way of the Applicant's agreeing to do test runs that would eliminate the operational concern. *See* our unpublished Orders, above, of February 19, 2004 (at 3) and February 27, 2004 (at 2). *This all took some time — but cask design and facility operations were both made safer because of it.*

[13] *See* LBP-03-4, 57 NRC at 97 n.38, 109 n.66 (sensitivity analysis); 118-19 (aircraft formation analysis), 133-35 (''order of magnitude'' evaluation), 133 n.97, 134 n.102 (''one-way'' outlook); 135 n.105 (failure to sharpen focus); and 138 (lack of parallel action).

The extra time involved should be expected to benefit the public interest, as the Staff assures that the application satisfies the regulatory requirements. The additional information developed should as well put the Applicant in a better position to defend its proposal at the hearing, and it should allow the Staff to take a more forceful position at the hearing in support of the Applicant. In the hearing on seismic matters, for example, the Staff's support (albeit derived from a source other than RAI responses) played an important role in this Applicant's success.[14]

As it turns out, in the instant case, the extra time and effort also benefitted the Applicant — after all, it has today obtained a favorable decision. In contrast, had the evidence in this phase of the aircraft hearing been submitted in time for us to render a late-2003 decision, the Applicant might not have had the Staff's support. And whether it did or not, the Applicant's evidence available at that time may have proved inadequate for it to carry its burden of proof.

In thus indicating the Applicant may have benefitted from the extra time it devoted to preparing the information to support its application, we hasten to add that we have no interest in whether an applicant or an intervenor prevails in any of the matters that come before us. Two years ago, we ruled against the Applicant on the first aircraft crash phase; today we rule in its favor on the second phase. In both instances, we did have an interest in the record being developed in a manner that ''allow[s] us to make an informed decision'' (LBP-03-4, 57 NRC at 141) on the merits without regard to which party our decision favors.

2. The foregoing observations apply to the great portion of the process, taking place in the nearly 2 years since our probability decision, that was *not* under our control. As they illustrate, we — like other Boards — control only a portion of the period during which an application is under agency consideration, which sometimes has been inaccurately attributed to time consumed by the adjudicatory process. The relative amount of time consumed by the adjudicatory process, compared to the Staff's regulatory review, will in large measure depend upon the degree to which the application, on which the hearing is to be held, comes with a thorough foundation at the outset.

In this particular instance, the part of the 2-year process that *was* under our control was managed, we think it fair to say, in an efficient manner that sped both the hearing and our decision along, and was fair to all involved. Once the matter came back to us after being in abeyance, we set a schedule and adhered to it. This was due both to the diligence exhibited[15] and accommodations made[16] by all three

[14] *See* discussion of Dr. Luk's work in LBP-03-8, 57 NRC at 352, 354-55, 357.

[15] For all practical purposes, once the hiatus ended and a new schedule was instituted, the parties met their filing obligations in a timely fashion.

[16] For example, the parties on their own made major adjustments to their cross-country deposition schedules to accommodate the serious medical problems encountered by a key witness.

parties (for which we commend counsel from the Applicant, the Staff, and the State), and to our innovative management of both anticipated[17] and unexpected[18] matters, some of which were of a routine nature,[19] and some of which could have been confounding.[20]

In the final analysis, then, the 14-month extension beyond the Commission's target date for completion of this stage of this case was simply attributable to the

---

[17] For example, we required the parties to submit, during the run-up to the hearing, not only prefiled direct testimony but prefiled rebuttal testimony as well (a step not required by the former version of the Rules of Practice, still applicable here). Having done that, we were able to institute a practice, when a witness took the stand to adopt orally his written prefiled direct and prefiled rebuttal testimony, of having *that witness also be asked on initial examination by his counsel to respond to any issues raised in the other parties' prefiled rebuttal testimony.* This avoided as much as possible having witnesses return to the stand on repeated occasions to provide rebuttal and other forms of responsive testimony, an approach that had seemed particularly inefficient during the earlier seismic hearings. *See* Telephonic Prehearing Conference of July, 15, 2004, Tr. at 15,162-63. This technique worked here; whether it would work in other circumstances is an open question.

[18] We found it helpful on occasion to depart from the usual order and to construct an impromptu ''debate'' between the witness on the stand and a prior witness from an opposing party. In this fashion, the competing views of both could meet head-on, or those views be reconciled on the spot, rather than through seriatim appearances. This not only promoted the efficient use of time, but it enabled, to the maximum extent practicable, sensible resolution of issues.

[19] We imposed measures to simplify the hearing logistics — avoiding wasting time on housekeeping procedural matters — that shortened the hearing's overall length. For example, we required the parties, not only to prefile all their exhibits for our prehearing review, as is customary, but also to prestamp the copies to be formally introduced. In uncomplicated cases, that step might not be necessary — but in this proceeding that simple prearranged administrative measure conserved enormous amounts of hearing time compared to earlier portions of this case.

In that regard, much time was consumed during the 2002 hearings by the need to stop the proceeding, each time an exhibit was identified and offered, to allow the court reporter to stamp each of the several copies and insert on each the necessary information (party name, exhibit number, date offered, and sponsoring witness). This proved especially burdensome and inordinately time-consuming when many exhibits were submitted simultaneously. During this phase, we required the parties to stamp and mark their exhibits in advance, thus allowing our law clerk simply to take possession of the exhibits without causing any interruption of the court reporter or of the proceeding. This was especially useful upon each party's starting to present its witnesses, occasions which led to the submission of a combined total of approximately 100 exhibits.

[20] For example, it was apparent that a variety of looming scheduling conflicts would have prevented the hearing's resumption for a considerable period if it were not concluded by September 15. We thus took the precaution of convening an unusual Sunday session on September 12 to assure that we finished on time.

This concern about ending the hearing served as a bookend to how we began it. To assure that the hearing started into substantive business promptly, without losing time for housekeeping matters, we had made arrangements for the parties to set up in their conference rooms off our hearing room on Sunday, August 8, the day before the hearing began.

need to fulfill properly the Atomic Energy Act's demands: to carry its burden of proof, an applicant must provide information sufficient to allow the agency to pass knowledgeable judgment on whether the license being sought is consistent with the protection of the public health and safety and the environment. Much of that is done outside our control. Where the process was within our control, we can report that there was no failure in the adjudicatory process or in our supervision of that process.[21]

[21] We note that this Decision is being issued (for all practical purposes) within the time frame the Commission typically expects (*see* p. 651, n.22, above), even though (1) the hearing was long and the issues quite complex and (2) there arose another matter, also decided today (LBP-05-5, involving a recently filed contention) that required our attention along the way.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nils J. Diaz, Chairman
Edward McGaffigan, Jr.
Jeffrey S. Merrifield
Gregory P. Jaczko[1]
Peter B. Lyons

In the Matter of **Docket No. PAPO-00**
(Pre-Application Matters)

U.S. DEPARTMENT OF ENERGY
(High-Level Waste Repository) **November 21, 2005**

The ''most important'' of our stay requirements is ''irreparable harm.'' *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-9, 40 NRC 1, 7 (1994). *Accord Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), CLI-01-11, 53 NRC 370, 393 (2001). Our regulations codify these standards. 10 C.F.R. § 2.342(e). The Staff's process-driven concern — namely, that it will have to review its files to consider whether documents meet the PAPO Board's test for ''circulated drafts'' — does not come close to irreparable harm in a legally meaningful sense.

RULES OF PRACTICE: STAY PENDING APPEAL

Litigation expense, even substantial and unrecoupable cost, does not constitute irreparable injury. *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), CLI-84-17, 20 NRC 801, 804 (1984). *Accord Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-11, 55 NRC 260,

[1] Commissioner Jaczko has recused himself from this matter and did not participate in today's decision.

263 (2002); *Sequoyah Fuels Corp.,* CLI-94-9, 40 NRC at 6-7. *See generally Federal Trade Commission v. Standard Oil Co.,* 449 U.S. 232, 244 (1980).

RULES OF PRACTICE: STAY PENDING APPEAL

Although we have suggested a willingness to consider issuing a stay, despite an absence of real harm, where the chance of reversal on appeal is ''overwhelming'' or a ''virtual certainty,'' this is not such a case. *See Sequoyah Fuels Corp.,* CLI-94-9, 40 NRC at 7.

RULES OF PRACTICE: STAY PENDING APPEAL

A stay is not justified merely to preserve the status quo while an appeal is pending on a complex question. Where there is no irreparable harm whatever, the Commission is reluctant to rush to judgment on the merits of an appeal before it has the opportunity to examine the Board's ruling and the parties' arguments in detail.

MEMORANDUM AND ORDER

The NRC Staff and the U.S. Department of Energy (DOE) have appealed the Pre-License Application Presiding Officer (PAPO) Board's ruling that certain drafts of DOE's license application for a geologic repository at Yucca Mountain must be made available on the Licensing Support Network (''LSN'').[2] The NRC Staff, but not DOE, has asked for a stay of the effectiveness of that order pending a final Commission decision on the appeals. We deny the NRC Staff's stay application.

I. BACKGROUND: LSN AND PAPO BOARD'S RULING

In June 2005, the State of Nevada filed a motion to compel DOE to make available on the LSN two particular drafts of its license application. Nevada asked that DOE be ordered to produce the drafts on or before the date DOE ''certifies'' that it has made its relevant documents electronically available.[3]

---

[2] LBP-05-27, 62 NRC 478 (2005).

[3] *See* 10 C.F.R. § 2.1009(b) (each potential party must certify to the PAPO that it has made available the documents identified in 10 C.F.R. § 2.1003). DOE must make its certification at least 6 months prior to submitting its license application. 10 C.F.R. § 2.1003(a).

Under our regulations governing repository licensing proceedings (10 C.F.R. Part 2, Subpart J), each participant must place on the LSN ''all documentary material (including circulated drafts but excluding preliminary drafts)''[4] on which the participant intends to rely or that are relevant. ''Documentary material'' includes ''[a]ll reports and studies, prepared by or on behalf of the potential party . . . including all related 'circulated drafts.' ''[5] A ''circulated draft'' is a ''nonfinal document circulated for supervisory concurrence or signature in which the original author or others in the concurrence process have non-concurred.''[6] Neither ''concurrence'' nor ''concurrence process'' is defined in the regulations.

Here, DOE's contractor delivered a draft license application in July 2004. After undergoing an extensive agency review process, a second version was produced in September 2004. Nevada argued that these two documents constitute ''circulated drafts'' of relevant ''documentary material'' that must be made available on the LSN at the time DOE certifies its document collection as electronically available. In a lengthy opinion, the PAPO Board agreed with Nevada.[7] The Board ordered DOE to include the two draft license applications in the LSN ''no later than'' the time of DOE's initial certification.[8]

The NRC Staff has already certified its document collection. DOE's earlier effort to do so proved unsuccessful.[9] Pursuant to a PAPO-issued ''Case Management Order,'' the NRC Staff has an ongoing obligation, on a monthly basis, to supplement its already-certified document collection.[10]

II. STAY DENIED

DOE and the NRC Staff disagree with several aspects of the Board decision ordering inclusion of the draft DOE license applications in the LSN. They focus on the meaning of the term ''circulated draft.'' DOE argues that the draft applications in question were not ''circulated,'' within the meaning of our rules, because they were not yet undergoing the formal ''concurrence'' process used by that agency. Instead, DOE says, the drafts were only ''preliminary'' drafts, explicitly excluded from mandatory inclusion in the LSN. The NRC Staff takes no

---

[4] 10 C.F.R. § 2.1003(a).

[5] 10 C.F.R. § 2.1001 (definition of ''documentary material'').

[6] *Id.* (definition of ''circulated draft'').

[7] LBP-05-27. Apparently, a third draft was produced in November 2004, but it is not subject to the Board order. *See id.* at 1 n.1.

[8] *See id.* at 52-53.

[9] *See* CLI-04-32, 60 NRC 469 (2004).

[10] *U.S. Department of Energy* (High-Level Waste Repository Pre-application Matters), Second Case Management Order (Pre-License Application Phase Document Discovery and Dispute Resolution), at 21-22 (July 8, 2005).

position on whether or not the DOE draft applications are in actuality ''circulated drafts,''[11] but expresses concern that the Board's legal interpretation of the term will drastically expand the number of documents all parties must place on the LSN, including the NRC Staff.

The NRC Staff asks us to stay the effectiveness of the Board's order. The Staff argues that it needs relief, pending the outcome of our appellate review of the PAPO Board's order, of any obligation ''to review its current process for identifying circulated drafts to determine whether it needs modification to ensure it is in compliance with the PAPO Board's Order.''[12] For several reasons, we find issuance of a stay, which the Commission treats as ''an extraordinary equitable remedy,''[13] inappropriate and unnecessary.

First, the NRC Staff's stay application fails to meet the ''most important'' of our stay requirements — ''irreparable harm.''[14] The Staff's process-driven concern — namely, that it will have to review its files to consider whether documents meet the PAPO Board's test for ''circulated drafts'' — does not come close to irreparable harm in a legally meaningful sense. The Commission has held expressly and repeatedly that ''litigation expense, even substantial and unrecoupable cost, does not constitute irreparable injury.''[15] Having consistently kept to this strict standard with licensees[16] and with intervenors,[17] we cannot relax it for the NRC Staff.

Second, even if a document review by the NRC Staff somehow could be considered irreparable harm, the Staff has not explained why a stay is necessary to avoid that harm. The PAPO Board decision ordering production of the DOE draft license applications does not, as such, require the NRC Staff to do anything. The

---

[11] *See* NRC Staff Appeal of LBP-05-27 and Application for a Stay, at 5 (Oct. 3, 2005).

[12] *Id.* at 14.

[13] *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-77-27, 6 NRC 715, 716 (1977). *Accord Nuclear Fuel Services, Inc.* (Erwin, Tennessee), LBP-04-2, 59 NRC 77, 79-80 (2004) (citing authorities). *See also Cuomo v. NRC,* 772 F.2d 972, 978 (D.C. Cir. 1985).

[14] *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-9, 40 NRC 1, 7 (1994). *Accord Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), CLI-01-11, 53 NRC 370, 393 (2001). Under our rules, in considering stay applications, we also consider probability of success on the merits, harm to others, and the public interest. *See Sequoyah Fuels Corp.,* CLI-94-9, 40 NRC at 6. Our regulations codify these standards. 10 C.F.R. § 2.342(e).

[15] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), CLI-84-17, 20 NRC 801, 804 (1984). *Accord Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-11, 55 NRC 260, 263 (2002); *Sequoyah Fuels Corp.,* CLI-94-9, 40 NRC at 6-7. *See generally Federal Trade Commission v. Standard Oil Co.,* 449 U.S. 232, 244 (1980).

[16] *See, e.g., Sequoyah Fuels Corp.,* CLI-94-9, 40 NRC at 6-8; *Three Mile Island,* CLI-84-17, 20 NRC at 802-05.

[17] *See, e.g., Private Fuel Storage,* CLI-02-11, 55 NRC at 262-64.

Staff apparently feels that an earlier Board order, on ''case management,''[18] which requires monthly supplements of certified document collections, compels the Staff to reconsider its approach to ''circulated drafts'' to ensure compliance with the PAPO Board's newly articulated definition. But there seems no reason why the Staff may not simply ask the PAPO Board to modify the case management order, temporarily, to accommodate the Staff's resource concerns during the pendency of the current appeals. Or, as Nevada suggests, the NRC Staff seemingly has the option to withdraw its certification, for the time being, while the Commission reviews the current appeals.[19] This would eliminate any need to file supplements. With self-help options available, there appears no reason for the Commission to stay this Board order not even directed to the Staff.

Finally, although we have suggested a willingness to consider issuing a stay, despite an absence of real harm, where the chance of reversal on appeal is ''overwhelming'' or a ''virtual certainty,''[20] not even the NRC Staff suggests this is such a case. The Staff says merely that ''the proper interpretation of the term 'circulated draft' is complex and a stay should be granted to maintain the *status quo.*''[21] We agree with the Staff that the issues here are complex — the Board wrote a 53-page opinion, and the parties (and a prospective *amicus curiae*) have provided us well more than 100 pages of appellate briefs. But significant and difficult issues do not justify a stay in and of themselves, absent a strong showing of irreparable harm.[22] Where, as here, there is no irreparable harm whatever, the Commission is reluctant to rush to judgment on the merits of an appeal before it has the opportunity to examine the Board's ruling and the parties' arguments in detail.

---

[18] *See* note 10, *supra.*

[19] *See* State of Nevada's Response to NRC Staff's Appeal, etc., at 10 (Oct. 13, 2005). The deadline for the NRC Staff's certification is 30 days after DOE's certification — which has not yet taken place. *See* 10 C.F.R. §§ 2.1003(a), 2.1009(b).

[20] *See Sequoyah Fuels Corp.,* CLI-94-9, 40 NRC at 7.

[21] NRC Staff Appeal of LBP-05-27 and Application for a Stay, at 14 (Oct. 3, 2005). The Staff cited to *Washington Metropolitan Area Transit Commission v. Holiday Tours, Inc.,* 559 F.2d 841, 844-45 (D.C. Cir. 1977) for the proposition that a tribunal may issue a stay when there is a ''difficult legal question and the equities in the case suggest that the status quo be maintained.'' In the instant case irreparable injury has not been demonstrated so as to raise substantial equity concerns. As the *Holiday Tours* Court stated: ''An order maintaining the status quo is appropriate when a serious legal question is presented, when little if any harm will befall other interested persons or the public and *when denial of the order would inflict irreparable injury on the movant.*'' *Id.* at 844 (emphasis added).

[22] *See Sequoyah Fuels Corp.,* CLI-94-4, 40 NRC at 8.

III. CONCLUSION

For the foregoing reasons, the NRC Staff's application for a stay pending appeal is *denied.*

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 21st day of November 2005.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nils J. Diaz, Chairman
Edward McGaffigan, Jr.
Jeffrey S. Merrifield
Gregory B. Jaczko
Peter B. Lyons

In the Matter of **Docket No. 70-3103-ML**

LOUISIANA ENERGY SERVICES, L.P.
(National Enrichment Facility) **November 21, 2005**

The Commission denies review of remaining claims in a petition for review of an Atomic Safety and Licensing Board Partial Initial Decision on environmental contentions.

RULES OF PRACTICE: PETITIONS FOR REVIEW

On highly technical, fact-intensive questions, where the affidavits or submissions of experts must be weighed, the Commission is generally disinclined to upset the findings and conclusions of a Presiding Officer.

NEPA: ENVIRONMENTAL IMPACT STATEMENT

The National Environmental Policy Act (NEPA) requires a reasonably close causal relationship between the alleged environmental effect and the alleged cause. The NEPA process does not extend to all conceivable consequences of agency decisions, no matter how far down the causal chain from a licensing decision and no matter how unpredictable.

NEPA: COST-BENEFIT ANALYSIS

Determination of economic benefits and costs that are tangential to environmental consequences are within a wide area of agency discretion. The NRC leaves to licensees the ongoing business decisions that relate to costs and profit.

NEPA: CONSIDERATION OF ALTERNATIVES

NEPA does not require a detailed study of rejected alternatives, but only a brief discussion of why an option was eliminated from further consideration. NEPA does not require agencies to analyze impacts of alternatives that are speculate, remote, impractical, or not viable. In addition, NEPA does not require a separate analysis of alternatives that would have substantially similar consequences.

NEPA: ENVIRONMENTAL ANALYSIS (INCORPORATION BY REFERENCE)

Environmental impact statements typically incorporate by reference other analyses and data by citing to the material and describing its content. What an agency cannot do is reflexively rubber stamp a statement prepared by others. Incorporated material must be reasonably available for inspection by interested persons within the time allowed for comment.

MEMORANDUM AND ORDER

The Commission has before it a petition for review of LBP-05-13,[1] an Atomic Safety and Licensing Board Partial Initial Decision on environmental contentions. In the petition, Intervenors Nuclear Information and Resource Service (NIRS) and Public Citizen (PC) allege seven Licensing Board errors. Recently, the Commission issued CLI-05-21, 62 NRC 538 (2005), which addressed one of those alleged errors (regarding waste disposal impacts), and remanded an environmental contention on disposal impacts to the Board. Our decision today addresses the remaining claims, and finds no basis for further Commission review.

[1] 61 NRC 385 (2005).

I. GROUNDWATER IMPACTS AND WATER SUPPLY IMPACTS

NIRS/PC allege that the Licensing Board erred in its findings after an evidentiary hearing that the NRC Staff's environmental reviews had adequately assessed impacts on groundwater and water supplies.[2] These environmental impact issues involved highly technical, fact-intensive questions. On such technical matters, ''where the affidavits or submissions of experts must be weighed,'' we are ''generally disinclined to upset'' the findings and conclusions of a Presiding Officer.[3] In short, while in some circumstances the Commission may choose to make its own *de novo* findings of fact, we ''generally do not exercise that authority where a Licensing Board has issued a plausible decision that rests on carefully rendered findings of fact.''[4] While it is always possible ''to come up with . . . more areas of discussion that conceivably could have been included,''[5] we find the Board's conclusions on groundwater and water supply impacts plausible, and see nothing in NIRS/PC's petition for review demonstrating the likelihood of ''clear error'' warranting plenary review.[6]

For the water supply impacts, NIRS/PC would have preferred to see additional impact analyses, including estimates of 30-year water usage at ''high, middle, and low values.'' But the Board found additional impact analyses unnecessary, given its conclusion that the evidence ''clearly establishes that the effects of the additional [National Enrichment Facility]-related water withdrawal are *de minimis* when compared with any relevant water resources, rights, or usage.''[7] In seeking more impact analyses, NIRS/PC cite to a decision where a ''reasonably foreseeable significant adverse impact[ ]'' was ''completely ignored'' and not analyzed.[8] Here, however, the Board simply found additional impact analyses unnecessary given the evidence showing *de minimis* impacts.

---

[2] *Id.* at 405-26.

[3] *See Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-00-12, 52 NRC 1, 3 (2000). *Accord Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-05-19, 62 NRC 403, 411 (2005).

[4] *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-03-8, 58 NRC 11, 25-26 (2003).

[5] *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 71 (2001).

[6] *See* 10 C.F.R. § 2.341(b)(4).

[7] *See* LBP-05-13, 61 NRC at 426; *see also id.* at 426 n.8.

[8] *See Mid States Coalition for Progress v. Surface Transportation Board,* 345 F.3d 520, 550 (8th Cir. 2003).

II. NUCLEAR PROLIFERATION IMPACTS

NIRS/PC argue that the Licensing Board erred in declining to admit for hearing their proposed contentions alleging a need to analyze the potential impacts of the proposed LES facility on national nuclear nonproliferation objectives, including the objectives of a 1993 agreement between the United States and Russia on the purchase of enriched uranium from Russian weapons stocks.[9] NEPA, however, ''requires a 'reasonably close causal relationship' between the [alleged] environmental effect and the alleged cause.''[10] Nuclear nonproliferation concerns span a host of factors far removed from the licensing action at issue. Any potential effects of the LES facility on nonproliferation policies and programs are speculative, and far afield from our decision whether to license the facility, given that achieving nonproliferation goals depends on independent future actions by numerous third parties, including the President, Congress, and officials of other nations. The NEPA process simply ''does not extend to all conceivable consequences of agency decisions, no matter how far down the causal chain from a nuclear licensing decision and no matter how unpredictable.''[11] The nation's nonproliferation objectives, and the United States–Russia highly enriched uranium (HEU) purchase agreement (commonly known as the ''Megatons to Megawatts'' program) are international in nature and do not have a ''proximate cause'' connection to the proposed NEF uranium enrichment facility sufficient to require a NEPA inquiry.[12]

NIRS/PC also alleged that the proposed LES facility would enhance nuclear proliferation risks because two individuals who were contractors working for Urenco (which owns financial interests in LES) ''took plans for centrifuge construction to Iraq'' in the late 1980s, and another individual working for Urenco in the mid-1970s stole centrifuge technology information that later was obtained by Pakistan and later shared with Libya, North Korea, and Iran.[13] But NIRS/PC nowhere linked these individuals to Urenco or LES's *current* management personnel or practices, and thus they have not shown how these long-ago alleged historical events pertain to the proposed LES facility. ''Allegations of management improprieties or poor 'integrity' . . . must be of more than

---

[9] *See* LBP-04-14, 60 NRC 40, 70 (2004); Petition on Behalf of NIRS/PC for Review of First Partial Initial Decision on Environmental Contentions (June 24, 2005) (NIRS/PC Petition) at 16-17.

[10] *Department of Transportation v. Public Citizen,* 541 U.S. 752, 767 (2004).

[11] *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 347 (2002) (finding that the NRC has no obligation under NEPA to consider terrorism).

[12] *See id.* at 349 & n.33 (citing *Metropolitan Edison Co. v. People Against Nuclear Energy,* 460 U.S. 760, 772-75 (1983)).

[13] NIRS/PC Petition at 17.

historical interest: they must relate directly to the proposed licensing action.''[14] The Board correctly found that NIRS/PC did not demonstrate a ''direct and obvious relationship'' between the alleged management ''character'' issues and the licensing action at issue.[15] We discern no reason to revisit the Board's rulings on the NIRS/PC nonproliferation contentions.[16]

III. IMPACT ON URANIUM ENRICHMENT MARKET

NIRS/PC argue the Licensing Board erred in limiting the NEPA analysis of the need for and costs and benefits of the LES facility. Specifically, the Board held that LES had no obligation to litigate a ''business plan'' or ''business case,'' or to demonstrate the potential profitability of the proposed facility.[17] On review, NIRS/PC argue that a NEPA analysis of the ''need'' for a proposed enrichment facility requires analysis of the facility's ''impact on the enrichment market,'' including likely effects on market price.[18] In support, NIRS/PC cite to a Commission decision in the earlier *LES* proceeding involving the Claiborne, Louisiana site.

But contrary to NIRS/PC's suggestion, our decision in the earlier *LES* proceeding did not hold that a NEPA analysis must detail potential market price effects. In that decision, the Commission merely deferred to and affirmed ''a Board factual determination [on price effects], concluding that the Board had 'sufficient reason to examine' the price-related matters that LES [itself] had 'repeatedly advanced.' ''[19] In short, because ''the record before the [Claiborne] Board included numerous specific claims of beneficial market price effects, . . . *made by LES,*'' the Commission concluded that it had been ''legitimate for the Board to evaluate this claimed economic benefit.''[20] But the Commission did not endorse LES's or the Board's price-effects approach. On the contrary, the Commission criticized the Board's overemphasis on price effects, and noted the ''inherent unpredictability

---

[14] *See Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 366 (2001) (citation omitted), *petition for reconsideration denied,* CLI-02-1, 55 NRC 1, 3-4 (2002).

[15] LBP-04-14, 60 NRC at 70.

[16] Those contentions were NIRS/PC EC-8 (''Impacts on National Security and Non-Proliferation Efforts'') and Basis G of NIRS/PC EC-7 (''Need for the Facility'').

[17] LBP-04-14, 60 NRC at 69.

[18] NIRS/PC Petition at 21.

[19] Answer of LES in Opposition to Petition for Review of LBP-05-13 (July 5, 2005) at 23-24 (citing *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 91, 96 (1998)).

[20] *Claiborne Enrichment Center,* CLI-98-3, 47 NRC at 91 (emphasis added).

of future market conditions and prices.''[21] The Commission stressed the other benefits asserted for the Claiborne facility, including lessening dependence on foreign suppliers and providing the United States with a more technologically advanced uranium enrichment technology.[22]

The Commission has said that the NRC is ''not in the business of regulating the market strategies of licensees'' or ''determin[ing] whether market conditions warrant commencing'' operations, and that we leave to licensees the ''ongoing business decisions that relate to costs and profit.''[23] ''An agency's primary duty under NEPA is to take a hard look at environmental impacts . . . . Determination of economic benefits and costs that are tangential to environmental consequences are within a wide area of agency discretion.''[24] Here — in contrast to the earlier *LES* proceeding — LES does not claim that the facility will bring about significant market price reductions, but that it will supplement and diversify existing domestic sources of enriched uranium, thus decreasing dependence on foreign sources and enhancing security of supply, and that it will do so by a technology (gas centrifuge) more advanced and energy efficient than that currently available in the United States.[25] We agree with the Board that LES need not litigate its ''business plans,'' nor must the NRC under NEPA perform a detailed market analysis of whether the LES facility would bring about appreciably lower uranium enrichment service prices.

IV. IMPACTS OF DECONVERSION PROCESS

LES intends to convert the depleted uranium hexafluoride (DUF_6) to be generated by its proposed uranium enrichment facility to a more stable product form, specifically triuranium octaoxide (U_3O_8), prior to disposal. The process of converting DUF_6 to another product form for ultimate disposal is commonly referred to as ''deconversion.'' Deconversion would not be performed at LES's proposed uranium enrichment facility, but at a separate facility. In their petition for review, NIRS/PC argue that the Board erroneously limited consideration of the impacts of deconversion. Specifically, they argue that depleted uranium dioxide (DUO_2) is an ''appropriate alternative'' disposal form, but that the

[21] *See id.* at 94-95.

[22] *See id.*

[23] *See Hydro Resources,* CLI-01-4, 53 NRC at 48-49.

[24] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 145 (2004).

[25] *See, e.g.,* FEIS, Vol. 1 at 1-2 to 1-5, 2-33 to 2-34, 2-40.

Board incorrectly prohibited NIRS/PC from raising arguments on DUO_2 as an ''alternative deconversion product.''[26]

As we see the record, the Board correctly ruled that NIRS/PC were late with their allegations about a need to analyze the alternative of converting DUF_6 to DUO_2. LES's Environmental Report made clear LES's intention to convert depleted uranium to the U_3O_8 form.[27] NIRS/PC plainly could have and should have raised their DUO_2 ''alternative'' claim following LES's Environmental Report. Indeed, that LES intended to dispose of ''deconverted U_3O_8'' was clearly understood by NIRS/PC in its intervention petition,[28] yet their petition nowhere argued that an alternate product form should be considered.

Moreover, the bases referenced in support of the conversion impacts contention in NIRS/PC's original petition referred specifically to a ''U_3O_8 deconversion plant,'' a ''depleted UF_6 to depleted U_3O_8 facility,'' and ''convert[ing] DUF_6 into U_3O_8.''[29] In short, there simply was no indication that the NIRS/PC contention also encompassed impacts of converting DUF_6 to an alternative disposal product form. Nor did NIRS/PC make any mention of a need to examine a DUO_2 alternative when it submitted a proposed supplement to the ''impacts'' contention, following issuance of the LES Draft Environmental Impact Statement.[30] Instead, NIRS/PC said nothing about the DUO_2 alternative until later, when their expert in a filed report and written direct testimony, respectively, stated that a ''possible waste form that should be examined . . . is the encapsulation of DUO_2 in an engineered ceramic,'' an option he described had ''potential unknowns . . . includ[ing] the fact that little industrial experience exists with these ceramic materials.''[31]

We therefore agree with the Board that NIRS/PC improperly and belatedly sought through its expert's testimony to ''introduce . . . essentially a new contention outlining an additional alternative for consideration.''[32] NRC adjudicatory proceedings ''would prove endless'' if parties were free at hearing to introduce entirely new claims which they either ''originally opted not to make or which

---

[26] *See* NIRS/PC Petition at 18.

[27] *See* LES Environmental Report (Dec. 2003) at 4.13-8, 4.13-14 to 4.13-15.

[28] *See* Petition To Intervene by NIRS/PC (Apr. 6, 2004) at 36, 37, 38; *see also id.* at 25-26, 29.

[29] *See id.* at 25-26; *see also id.* at 31 (referencing and incorporating the bases filed in support of NIRS/PC's ''plausible strategy'' contention on depleted uranium disposition).

[30] *See* Motion on Behalf of NIRS/PC To Amend and Supplement Contentions (Oct. 20, 2004) at 12-15.

[31] *See* ''Costs and Risks of Management and Disposal of Depleted Uranium from the National Enrichment Facility'' (Nov. 24, 2004) (Proprietary) at 30-31; Direct Testimony of Dr. Makhijani Regarding NIRS/PC Contention EC-4 (Jan. 7, 2005) at 16.

[32] *See* Memorandum and Order (Ruling on In Limine Motions) (Jan. 21, 2005) at 8.

simply did not occur to [them] at the outset.' ''[33] NIRS/PC had no need to await additional documents or analyses from LES or the NRC Staff to raise their DUO_2 alternative product form issue.[34]

Moreover, NEPA does not require a separate analysis of alternatives that would have ''substantially similar consequences.''[35] LES's Environmental Report describes and references a Department of Energy study of disposal strategies for depleted uranium hexafluoride, which assessed the impacts of disposing of depleted uranium in both the U_3O_8 and UO_2 product forms. As LES's Environmental Report notes, the DOE study found that potential disposal impacts would ''tend to be [only] slightly larger for U_3O_8 than for UO_2'' because the volume of U_3O_8 would be greater.[36] NIRS/PC's petition did not challenge this conclusion.

In addition, NEPA does not require a detailed study of rejected alternatives, only a brief discussion of why an option was eliminated from further consideration.[37] In the DEIS, the NRC Staff concluded that deconversion to U_3O_8 would be preferable over other disposition options due to its chemical stability.[38] NIRS/PC did not challenge this conclusion in its October 2004 motion to amend contentions, filed after the DEIS was issued.

On review, NIRS/PC also argue that the LES DEIS is deficient because it does not analyze a particular deconversion process. Deconversion of DUF_6 to U_3O_8 is a chemical process that produces aqueous hydrofluoric acid (HF). One method of deconversion utilizes lime to neutralize the hydrofluoric acid to produce calcium fluoride (CaF_2) for disposal or sale. Another method converts the DUF_6 to DU_3O_8 and anhydrous hydrofluoric acid (AHF) through a process involving distillation.[39] When LES filed its application, it had not yet determined whether it would convert

---

[33] *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-04-33, 60 NRC 581, 591 (2004) (quoting *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 428-29 (2003)).

[34] Indeed, NIRS/PC's expert argued in his filed testimony of January 2005 that LES's *Environmental Report* (as well as the later-issued DEIS) should have considered producing ''UO_2 rather than U_3O_8'' by the deconversion process because UO_2 may be ''more suited for final disposal.'' *See* ''Direct Testimony of Dr. Arjun Makhijani Regarding Contention EC-4'' (Jan. 7, 2005) at 8, 14. Obviously, this claim could have been raised following the Environmental Report.

[35] *See Westlands Water District v. United States Department of Interior,* 376 F.3d 853, 868, 871 (9th Cir. 2004) (quoting *Headwaters, Inc. v. Bureau of Land Management,* 914 F.2d 1174, 1181 (9th Cir. 1990)).

[36] *See* LES Environmental Report (Dec. 2003) at 4.13-13.

[37] *See Fuel Safe Washington v. Federal Energy Regulation Commission,* 389 F.3d 1313, 1323 (10th Cir. 2004).

[38] *See* NUREG-1790, ''Environmental Impact Statement for the Proposed National Enrichment Facility, Draft Report for Comment (DEIS),'' at 2-28 (Sept. 2004).

[39] LBP-05-13, 61 NRC at 428.

the DUF_6 using the CaF_2 or anhydrous hydrofluoric acid (AHF) process.[40] Since then, as the Board noted, LES committed to amend (and did amend) its license application to assure that the anhydrous hydrofluoric acid (AHF) deconversion process will not be used at any deconversion facility selected for deconversion of LES's DUF_6.[41]

NIRS/PC nonetheless argue that the AHF deconversion process ''should have been examined but was not.''[42] They claim that the AHF process presents ''significantly greater risks'' than the calcium fluoride process that LES has selected and says will be used.[43] NIRS/PC argue that because the Department of Energy (DOE) analyzed the AHF process in a Programmatic Environmental Impact Statement (PEIS) on depleted uranium disposition,[44] and an enrichment services company (Cogema) pursued an AHF process for deconversion, ''it is clearly a realistic alternative'' requiring NEPA impacts analysis.[45]

We disagree. NEPA does not require agencies to analyze impacts of alternatives that are speculative, remote, impractical, or not viable.[46] The record in this proceeding highlights the still undeveloped nature of the AHF process for use in a deconversion facility.[47]

Additionally, as the Board noted, LES revised its license application to assure that the AHF conversion method will *not* be used by any deconversion vendor contracted to treat the LES DUF_6. Such a commitment will be, as the Board stresses, ''a condition on the [LES] license.''[48] Accordingly, for the AHF process to be employed for deconversion of LES's DUF, LES would need to obtain a license amendment. In such an event, the Staff would be required to analyze impacts of the AHF deconversion process during its review process, and the Intervenors would have full opportunity to challenge the amendment and raise safety or environmental impact concerns.

In any event, here the Board nonetheless did examine impacts associated with the AHF process. The Board noted, however, that given that there is no current deconversion facility using an AHF process, and no current plan to construct

---

[40] *Id.*

[41] *Id.* at 428-29.

[42] NIRS/PC Petition at 18.

[43] *Id.*

[44] Although DOE analyzed the AHF process, it ultimately decided against using an AHF deconversion process for its proposed facilities at Portsmouth, Ohio, and Paducah, Kentucky.

[45] NIRS/PC Petition at 18.

[46] *See Fuel Safe Washington v. Federal Energy Regulatory Commission,* 389 F.3d at 1323, 1324; *see also Westlands Water District,* 376 F.3d at 868.

[47] *See, e.g.,* LES Hearing Transcript at 1124-25; Rebuttal Testimony of Dr. Arjun Makhijani Regarding EC-4 (Feb. 7, 2005) at 5.

[48] LBP-05-13, 61 NRC at 429.

such a facility, any assessment of the impacts of using the AHF process would involve much uncertainty. Given this uncertainty, the Board found that there was sufficient consideration in the record of the ''impacts of the management of anhydrous HF.''[49] We find the Board's conclusion reasonable.

V. RELIANCE ON DEPARTMENT OF ENERGY ANALYSES

In their petition for review, NIRS/PC also argue that the Board erroneously relied upon Environmental Impact Statements prepared by the Department of Energy (DOE). Specifically, they claim that the DEIS analysis of deconversion impacts is deficient because ''the NRC Staff did no analysis and, instead, relied upon DOE documents, which [the] Staff neither prepared nor even checked.''[50]

Environmental impact statements typically incorporate by reference other analyses and data by citing to the material and describing its content.[51] Incorporated material must be reasonably available for inspection by interested persons within the time allowed for comment.[52] Here, the DEIS properly incorporated by reference conclusions from two DOE Environmental Impact Statements that had studied the environmental impacts expected from a DUF_6 conversion facility to be located at Portsmouth, Ohio, and Paducah, Kentucky, respectively.[53] These EISs were publicly available for review.

In addition, the NRC Staff's expert repeatedly affirmed during the hearing that he had assessed the reasonableness of the DOE assumptions, calculations, and conclusions, even though he did not redo its underlying calculations.[54] Actually redoing the DOE's calculations would have been a duplication of resources not required by law. What an agency cannot do is ''reflexively rubber stamp a statement prepared by others.''[55] Here, the Staff's expert found the DOE conversion impacts analyses reasonable ''based on an assessment of the material presented and their supporting documents.''[56] In short, there was an independent evaluation of the DOE conclusions.

NIRS/PC also claim that the Board's decision erroneously relied on a 1999 DOE Programmatic Environmental Impact Statement (PEIS) analysis of decon-

---

[49] *Id.* at 435.

[50] NIRS/PC Petition at 19.

[51] *See* 40 C.F.R. § 1502.21.

[52] *See id.*

[53] *See* DEIS at 4-53 to 4-57.

[54] *See* LES Hearing Transcript (Feb. 8, 2005) at 965-66, 970, 971, 1027, 1029-30, 1032, 1035, 1038, 1042-44, 1053.

[55] *See Save Our Wetlands, Inc. v. Sands,* 711 F.2d 634, 642 (5th Cir. 1983).

[56] *See* Transcript at 1053.

version impacts, which was not explicitly referenced in the DEIS conversion impacts analysis. They suggest, therefore, that the Board inappropriately ''devise[d] new rationales to sustain [NRC] agency action.''[57] But the PEIS was made available as an exhibit at the hearing, and thus NIRS/PC had full opportunity to present its own evidence challenging the relevant PEIS deconversion impact conclusions. The Board found that the Staff's analysis in the DEIS, ''as supplemented by the testimony and evidence submitted in this proceeding,'' adequately discussed the impacts of construction and operation of a conversion plant for the DUF_6 waste that would be generated by the LES proceeding.[58] In an adjudicatory hearing, the ''adjudicatory record and Board decision (and, of course, any Commission appellate decisions) become, in effect, part of the FEIS.''[59] ''[T]o the extent that any environmental findings by the [Board] (or the Commission) differ from those in the FEIS, the FEIS is deemed modified by the decision.''[60]

V. CONCLUSION

For the reasons given in this decision, we *deny* review of the pending issues raised in the NIRS/PC petition for review of LBP-05-13.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 21st day of November 2005.

---

[57] NIRS/PC Petition at 21.

[58] LBP-05-13, 61 NRC at 436.

[59] *See Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 53 (2001) (quoting *Claiborne,* CLI-98-3, 47 NRC at 89). While the deconversion impacts analysis in the DEIS does not cite to the DOE PEIS, it was clear from the hearing, as LES points out, that the Staff's ''review of environmental analyses in the PEIS substantially informed its preparation of the DEIS.'' *See* Answer of LES in Opposition to Petition for Review of LBP-05-13 (July 15, 2005) at 19 (citing Transcript at 1000-07, 1018-22). The NRC Staff expert who prepared the DEIS conversion impacts analysis explained that he had not expressly cited to the PEIS because it was not the most current analysis of conversion impacts. *See* Transcript at 1052. Instead, the LES DEIS conversion impacts discussion cites to and describes the DOE EISs for Portsmouth and Paducah, which in turn incorporate by reference the DOE PEIS.

[60] *See Hydro Resources,* CLI-01-4, 53 NRC at 53.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Alan S. Rosenthal, Presiding Officer
Dr. Paul B. Abramson, Special Assistant

In the Matter of **Docket No. 40-8838-MLA-2**
(ASLBP No. 04-819-04-MLA)

U.S. ARMY
(Jefferson Proving Ground Site) **November 1, 2005**

MEMORANDUM AND ORDER
(Dismissing Proceeding as Moot)

On September 12, 2005, in LBP-05-25, 62 NRC 435, we held in abeyance the July 19, 2005 motion of the Department of the Army to dismiss this materials license amendment proceeding involving its Jefferson Proving Ground (JPG) site in Indiana on which a substantial quantity of depleted uranium (DU) munitions is now amassed. The basis of the motion was that, whereas the proceeding involved an application for a 5-year renewable possession-only license (POLA), the Army had now decided to abandon the POLA proposal in favor of seeking Commission approval of an alternate schedule for the submittal of a decommissioning plan for the JPG site. For the reasons set forth in LBP-05-25, which do not require repetition here, we concluded that, in the circumstances, the appropriate course was to reinstate a previously conditionally dismissed proceeding (Docket No. 40-8838-MLA) likewise concerned with the JPG site and the accumulated DU munitions,[1] to refer the reinstatement to the Commission for its consideration, and

[1] *See* LBP-03-28, 58 NRC 437, 440 (2003).

to await the Commission's response before acting on the motion to dismiss the proceeding at bar.

The Commission has now spoken. CLI-05-23, 62 NRC 546 (2005). It has affirmed the reinstatement of Docket No. 40-8838-MLA, although directing that its further adjudication be conducted by a licensing board rather than by this presiding officer and special assistant. Accordingly, there is no longer any reason to keep the proceeding at bar alive and it is hereby *dismissed as moot.*

IT IS SO ORDERED.

BY THE PRESIDING OFFICER[2]

Alan S. Rosenthal
ADMINISTRATIVE JUDGE

Rockville, Maryland
November 1, 2005

[2] Copies of this Memorandum and Order were sent by Internet electronic mail transmission to the counsel for the parties.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Lawrence G. McDade, Chairman
Dr. Richard E. Wardwell
Dr. William M. Murphy

In the Matter of **Docket No. 50-263-LR**
(ASLBP No. 05-841-02-LR)

NUCLEAR MANAGEMENT COMPANY, LLC
(Monticello Nuclear Generating Plant)

November 1, 2005

In this proceeding regarding the application of Nuclear Management Company, LLC (NMC) to renew the operating license for its Monticello Nuclear Generating Plant (MNGP), the Licensing Board finds that the North American Water Office (NAWO) has failed to demonstrate standing to intervene and has not submitted an admissible contention, and therefore does not admit NAWO as a party to the proceeding.

RULES OF PRACTICE: STANDING TO INTERVENE

A '' 'generalized grievance' shared in substantially equal measure by all or a large class of citizens will not result in a distinct and palpable harm sufficient to support standing.'' *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), CLI-83-25, 18 NRC 327, 333 (1983).

RULES OF PRACTICE: STANDING TO INTERVENE

An allegation of a special interest in a proceeding, no matter how longstanding, without a showing of a particularized harm is insufficient to establish standing. *Puget Sound Power and Light Co.* (Skagit/Hanford Nuclear Power Project, Units 1 and 2), LBP-82-74, 16 NRC 981, 983 (1982).

RULES OF PRACTICE: INTERVENTION PETITION (PLEADING REQUIREMENTS); STANDING TO INTERVENE (AUTHORIZATION)

When an entity seeks to intervene on behalf of its members, that entity must show it has an individual member who can fulfill all the necessary standing elements and who has authorized the organization to represent his or her interests.

RULES OF PRACTICE: INTERVENTION

To intervene in a proceeding, in addition to establishing standing, a petitioner must also set forth at least one admissible contention. *See* 10 C.F.R. § 2.309(a)-(b).

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

An admissible contention must (1) provide a specific statement of the legal or factual issue sought to be raised; (2) provide a brief explanation of the basis for the contention; (3) demonstrate that the issue raised is within the scope of the proceeding; (4) demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding; (5) provide a concise statement of the alleged facts or expert opinions, including references to specific sources and documents, that support the petitioner's position and upon which the petitioner intends to rely at hearing; and (6) provide sufficient information to show that a genuine dispute exists with regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief. 10 C.F.R. § 2.309(f)(1)(i)-(vi). The purpose of the contention rule is to ''focus litigation on concrete issues and result in a clearer and more focused record for decision.'' 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004). The Commission has stated that it ''should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing.'' *Id.* The Commission has also emphasized that the rules on contention admissibility are ''strict by design.'' *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001), *petition for reconsideration denied,* CLI-02-1, 55 NRC 1 (2002).

Failure to comply with any of these requirements is grounds for the dismissal of a contention. 69 Fed. Reg. at 2221.

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

A ''brief explanation of the basis for the contention'' is a necessary prerequisite of an admissible contention. 10 C.F.R. § 2.309(f)(1)(ii). ''[A] petitioner must provide some sort of minimal basis indicating the potential validity of the contention.'' 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989). The brief explanation helps define the scope of a contention — ''[t]he reach of a contention necessarily hinges upon its terms coupled with its stated bases.'' *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 (1988), *aff'd sub nom. Massachusetts v. NRC,* 924 F.2d 311 (D.C. Cir. 1991), *cert. denied,* 502 U.S. 899 (1991). *See also Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 (2002).

RULES OF PRACTICE: CONTENTIONS (SCOPE OF PROCEEDING)

A petitioner must demonstrate that the ''issue raised in the contention is within the scope of the proceeding,'' 10 C.F.R. § 2.309(f)(1)(iii), which is defined by the Commission in its initial hearing notice and order referring the proceeding to the Licensing Board. *See Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985). Any contention that falls outside the specified scope of the proceeding must be rejected. *See Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289-90 n.6 (1979).

RULES OF PRACTICE: CONTENTIONS (MATERIALITY)

A petitioner must demonstrate that the contention asserts an issue of law or fact that is material to the findings the NRC must make to support the action that is involved in the proceeding; that is, the petitioner must demonstrate that the subject matter of the contention would impact the grant or denial of a pending license application. 10 C.F.R. § 2.309(f)(1)(iv). ''Materiality'' requires that the petitioner show why the alleged error or omission is of possible consequence to the result of the proceeding. *Portland Cement Association v. Ruckelshaus,* 486 F.2d 375, 394 (D.C. Cir. 1973), *cert. denied sub nom. Portland Cement Corp. v. Administrator, Environmental Protection Agency,* 417 U.S. 921 (1974). This means that there must be some significant link between the claimed deficiency and either the health and safety of the public or of the environment. *Yankee*

Atomic Electric Co. (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 75 (1996), *rev'd in part on other grounds,* CLI-96-7, 43 NRC 235 (1996). *See also Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 439-41 (2002), *petition for review denied,* CLI-03-12, 58 NRC 185, 191 (2003).

RULES OF PRACTICE: CONTENTIONS (SUPPORTING INFORMATION OR EXPERT OPINION)

Contentions must be supported by ''a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue . . . together with references to the specific sources and documents on which [it] intends to rely to support its position.'' 10 C.F.R. § 2.309(f)(1)(v). It is the obligation of a petitioner to present the factual information and expert opinions necessary to adequately support its contention. *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 305, *vacated in part and remanded on other grounds,* CLI-95-10, 42 NRC 1, *and aff'd in part,* CLI-95-12, 42 NRC 111 (1995). A contention will be inadmissible ''if the petitioner 'has offered no tangible information, no experts, no substantive affidavits,' but instead only 'bare assertions and speculation.' '' *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003) (citing *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 208 (2000)).

RULES OF PRACTICE: CONTENTIONS (CHALLENGE TO LICENSE APPLICATION)

All contentions must ''show that a genuine dispute exists'' with regard to some element of the license application in question. The petition to intervene must challenge and identify either specific portions of, or alleged omissions from, the application, and provide the supporting reasons for each dispute. 10 C.F.R. § 2.309(f)(1)(vi). Any contention that fails directly to controvert some portion of the application, or that mistakenly asserts that the application does not address a relevant issue, may be dismissed. *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 247-48 (1993), *petition for review declined,* CLI-94-2, 39 NRC 91 (1994). *See also Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992).

RULES OF PRACTICE: CONTENTIONS (CHALLENGES TO STATUTORY REQUIREMENTS/REGULATORY PROCESS/COMMISSION RULE)

With limited exceptions, ''no rule or regulation of the Commission . . . is subject to attack . . . in any [NRC] adjudicatory proceeding.'' 10 C.F.R. § 2.335(a). *See also Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 218 (2003). By the same token, any contention that amounts to an attack on applicable statutory requirements must be rejected by a Licensing Board as outside the scope of its proceeding. *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-76, 16 NRC 1029, 1035 (1982) (citing *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20-21 (1974)). The NRC adjudicatory process is not the proper venue for the evaluation of a petitioner's personal view regarding the direction regulatory policy should take. *See id.*

RULES OF PRACTICE: CHALLENGE TO COMMISSION REGULATIONS

A contention that challenges the NEPA analysis performed in a relicensing proceeding by questioning the analysis used by the Commission in developing a GEIS constitutes an impermissible attack on agency regulations. 10 C.F.R. § 2.335(a).

NEPA: CONSIDERATION OF ALTERNATIVES

In its ER, an applicant is required to provide a discussion of alternatives to the proposed action that is sufficiently complete to aid the Commission in developing and exploring appropriate alternatives to the recommended course of action. 10 C.F.R. § 51.45(b)(3). However, only alternatives reasonably related to the goals of the proposed action, and the no-action alternative, need be considered. *See Sacramento Municipal Utility District,* CLI-93-3, 37 NRC 135, 144-45 (1993). The applicant is only required to consider feasible, nonspeculative alternatives, and the range of alternatives need not extend beyond those reasonably related to the purposes or goals of the proposed project. *See City of Carmel-by-the-Sea v. Department of Transportation,* 123 F.3d 1142, 1155 (9th Cir. 1997); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 65 (1991).

SCOPE OF EIS: REMOTE AND SPECULATIVE EVENTS (TERRORISM)

The environmental impacts of terrorism are insufficiently related to the effects of plant aging to be material to a license renewal proceeding. To the extent a contention attempts to raise NEPA-related terrorism issues, the Commission has ruled that an EIS is not an appropriate place to address such issues. *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-26, 56 NRC 358, 364 (2002); *see also Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340 (2002).

MEMORANDUM AND ORDER
(Ruling on Standing and Contention Admissibility)

Before the Board is a petition to intervene related to the application of the Nuclear Management Company, LLC (NMC) to renew the operating license for its Monticello Nuclear Generating Plant (MNGP) in Monticello, Minnesota (located approximately 30 miles northwest of Minneapolis). The petition was filed by the North American Water Office (NAWO),[1] an organization that describes itself as a public interest group formed to educate the public regarding environmental problems caused by society's waste, with a particular focus on the adverse health and economic consequences that the waste from electric utilities has on Indigenous Peoples, Peoples of Color, and those who live at subsistence levels.[2] On August 8, 2005, the Commission referred this petition to the Licensing Board Panel for its consideration.[3]

For the reasons set forth below, we find that NAWO has not demonstrated standing to intervene in this proceeding, nor has it submitted an admissible contention relating to the NMC license renewal application. Accordingly, for both of these reasons we decline to admit NAWO as a party to this proceeding.

---

[1] Request for a Hearing and Petition for Leave To Intervene by the North American Water Office (July 9, 2005) [hereinafter NAWO Petition].

[2] *Id.* at 1.

[3] Memorandum to Chief Administrative Judge G.P. Bollwerk, III, from A.L. Bates, NRC Acting Secretary (Aug. 8, 2005). *See also* 70 Fed. Reg. 48,607 (Aug. 18, 2005) (establishing Licensing Board) and ASLBP Notice of Reconstitution (Aug. 25, 2005) (unpublished).

I. BACKGROUND

A. NMC's Application and the Proposed License Renewal

On March 16, 2005, pursuant to 10 C.F.R. Part 54, NMC filed with the Commission an application for a 20-year renewal of its 10 C.F.R. Part 50 operating license for its MNGP. The current license expires on September 8, 2010. NMC's license application (LA) includes a final safety analysis report (FSAR) supplement, an environmental report (ER) supplement, an integrated plant assessment (IPA), an aging management review (AMR), and time-limited aging analyses (TLAAs).[4] The MNGP, NMC, and the license renewal process are adequately described in the license application and those descriptions need not be repeated here.

B. NAWO Hearing Request/Intervention Petition and Responses

On July 9, 2005, in accordance with the Commission's Notice of Opportunity for Hearing in this proceeding,[5] NAWO filed with the Commission a request for a hearing and petition for leave to intervene in the proceeding on the MNGP license renewal application, stating that it has standing to intervene and has proffered admissible contentions.[6] On August 3, 2005, NMC and the NRC Staff each filed responses to the NAWO petition. For its part, NMC asserts that NAWO failed to demonstrate either organizational or representational standing, and further failed to proffer any admissible contentions because, among other things, NAWO's contentions are outside the scope of the license renewal proceeding and provide inadequate factual and expert opinion support.[7] The NRC Staff similarly contests NAWO's standing to intervene, either in an organizational or in a representational

---

[4] Application for Renewed Operating License, Monticello Nuclear Generating Plant (Mar. 16, 2005), ADAMS Accession No. ML0508802450.

[5] 70 Fed. Reg. 25,117-19 (May 12, 2005).

[6] *See* NAWO Petition. We note that in its Answer to NAWO's Petition the NRC Staff stated, at 2 n.3, that while the petition was served via e-mail on July 9, 2005, NAWO failed to serve an original signed copy as required by 10 C.F.R. § 2.305(c). NAWO did not respond to this allegation in its reply comment (Aug. 9, 2005) [hereinafter NAWO Reply]. Pursuant to 10 C.F.R. § 2.302(a)(3), petitions to intervene in Commission proceedings may be filed by e-mail. However, such documents ''may be refused acceptance for filing,'' 10 C.F.R. § 2.304(g), unless, within two (2) days after the electronic filing, an original and two copies of these documents, in the format specified by section 2.304(b), are mailed to the Commission's Rulemakings and Adjudications Staff. 10 C.F.R. § 2.304(f). Here, the NRC Staff did not request that the Board take any action based on NAWO's failure to comply with the rules, and the Commission did accept the petition for filing.

[7] NMC's Answer to Request for Hearing and Petition To Intervene by the NAWO (Aug. 3, 2005) [hereinafter NMC Answer].

capacity, and likewise avers that NAWO has not set out an admissible contention.[8] NAWO filed a reply to these responses on August 9, 2005, in which it provided additional information relative to its proffered contentions, specifically with regard to NAWO Contentions No. 4 and 5.[9]

C. Additional Matters

On August 19, 2005, the NRC Staff filed a motion to strike NAWO's reply,[10] asserting that by its reply NAWO sought to raise for the first time wholly new arguments that were not included in its original petition and failed to address the 10 C.F.R. §§ 2.309(c) and 2.309(f)(2) criteria for late-filed contentions. NAWO responded to that motion on August 29, 2005, stating that its reply was a legitimate response to the Staff's answer, and that the Staff had not made a ''sincere effort'' to resolve the issues raised in the motion to strike before filing that motion with the Board as required by 10 C.F.R. § 2.323(b).[11] As discussed further below at p. 758, the NRC Staff's motion to strike is *denied,* and the Board has fully considered the NAWO reply to the extent its substance legitimately amplifies issues first raised in the NAWO petition.[12]

Thereafter, on September 30, 2005, NAWO filed a motion in which it asked this Board to declare NMC's LA incomplete and to direct that it be withdrawn. More specifically, NAWO alleged that the LA failed to identify numerous components that experience aging-related deterioration. As evidence of that fact, NAWO offered the requests for additional information (RAIs) that were sent to NMC by the NRC Staff on September 15 and 16, 2005. This motion is also *denied.*[13]

---

[8] NRC Staff Answer to Petition To Intervene and Request for Hearing of the NAWO (Aug. 3, 2005) [hereinafter NRC Staff Answer].

[9] Reply Comment of NAWO (Aug. 3, 2005) [hereinafter NAWO Reply].

[10] NRC Staff Motion To Strike Comment of the NAWO (Aug. 19, 2005) [hereinafter Staff Motion To Strike].

[11] Reply of the North American Water Office to NRC Staff Motion To Strike Comment of North American Water Office (Aug. 29, 2005) at 2-3.

[12] *See Louisiana Energy Services, L.P.* (National Enrichment Facility), LBP-04-14, 60 NRC 40, 58 (2004), *aff'd in relevant part,* CLI-04-25, 60 NRC 223 (2004).

[13] In its response, the NRC Staff asks that we not consider this motion because it was not timely filed in accordance with 10 C.F.R. § 2.323(a) (the NRC Staff avers that the motion was filed more than 10 days after the NRC submitted the RAIs to NMC), and also because NAWO did not consult with the other parties prior to filing the motion in an effort to resolve the issues raised in the motion as required by 10 C.F.R. § 2.323(b). Given that NAWO is proceeding *pro se,* that it is clear that neither the NRC Staff nor NMC would have agreed to the relief requested in the motion, and that it is unclear when the occurrence or circumstance from which the motion arose occurred, we decline the Staff's suggestion to dispose of this motion on procedural defects, and we have considered NAWO's motion

(Continued)

The completeness of NMC's LA is not a matter that this Board should, or can, decide upon a motion. The decision whether to accept the LA for docketing is made by the NRC Staff, and that decision is not subject to review by this Board.[14] If NAWO believed there were deficiencies in the LA that it wished to raise before this Board, it should have identified them in a proposed contention and, if the contention were admitted and found meritorious, the license application would not be granted.[15] NAWO's motion is simply not an appropriate manner by which to raise these issues.

II. ANALYSIS

NRC regulations require that any individual, group, business, or governmental entity that wishes to intervene as a party in an adjudicatory proceeding addressing a proposed licensing action must (1) file a timely written request to intervene; (2) establish that it has standing; and (3) offer at least one admissible contention.[16]

A. Standing

A petitioner seeking to establish that it has standing to participate in an NRC adjudicatory proceeding must provide information in its petition to intervene concerning: (1) the nature of the petitioner's right under the Atomic Energy Act (AEA) or the National Environmental Policy Act (NEPA) to be made a party;

---

on its merits. *See Public Service Electric and Gas Co.* (Salem Nuclear Generating Station, Units 1 and 2), ALAB-136, 6 AEC 487, 489 (1973); *International Uranium (USA) Corp.* (White Mesa Uranium Mill), LBP-01-8, 53 NRC 204, 207-08 (2001).

We note, however, our discomfort with the apparent fact that NAWO did not serve a copy of this motion on counsel for the NRC Staff. *See* NRC Staff Answer to Motion of NAWO (Oct. 17, 2005) at 1 n.1. If NAWO files additional pleadings in NRC adjudicatory proceedings, it should consider that the failure properly to serve counsel for the other participants in the litigation may result in its pleading being stricken. *See* 10 C.F.R. § 2.319; *see also Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Unit 2), LBP-92-26, 36 NRC 191 (1992) (striking of a pleading was viewed as an appropriate sanction to educate a litigant on the need to comply with NRC Rules of Practice and directives from the Board).

[14] *New England Power Co.* (NEP Units 1 and 2), LBP-78-9, 7 NRC 271, 280 (1978).

[15] *Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), LBP-98-26, 48 NRC 232, 242-43, *aff'd,* CLI-98-25, 48 NRC 325, 349-50 (1998). *See also Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), LBP-91-41, 34 NRC 332, 338-39 (1991).

[16] 10 C.F.R. § 2.309(a)-(b). The current regulation covering, *inter alia,* contention requirements is 10 C.F.R. § 2.309, adopted on January 14, 2004, effective February 13, 2004. 69 Fed. Reg. 2182, 2198-203 (Jan. 14, 2004). The current regulation is, in pertinent part, substantially similar to the prior regulation, 10 C.F.R. § 2.714. The case law cited herein generally refers to the prior regulation or its predecessors.

(2) the petitioner's property, financial, or other interests in the proceeding; and (3) the potential effect that any decision reached within the proceeding may have on the petitioner's interest.[17]

More specifically, to establish standing a petitioner must demonstrate ''injury in fact.'' That is, the petitioner must show that some injury has occurred to it, or will probably occur to it, as a result of the agency action, and that the injury is within the ''zone of interests'' protected by the AEA or NEPA. Moreover, the demonstrated injury to the petitioner must be both concrete and particularized, not conjectural or hypothetical.[18] The petitioner must demonstrate that the injury is traceable to the proposed action, and that a favorable decision in the proceeding is likely to redress the alleged injury.[19] An academic interest in the matter, without a direct impact on the person or organization asserting it, does not confer standing.[20]

An organization may satisfy the standing criteria set forth in 10 C.F.R. § 2.309(d)(1) by demonstrating (1) organizational standing, or (2) representational standing. To demonstrate organizational standing, the petitioner must show ''injury in fact'' to the interests of the organization itself,[21] as well as demonstrate a causal nexus and redressability. To plead representational standing, on the other hand, the organization

> must demonstrate how at least one of its members may be affected by the licensing action (such as by activities on or near the site), must identify that member by name and address, and must show (preferably by affidavit) that the organization is authorized to request a hearing on behalf of that member.[22]

In other words, the organization must show that one or more of its members would have standing to intervene on their own behalf, and that such a specifically identified member has authorized the organization to request a hearing on their

---

[17] 10 C.F.R. § 2.309(d)(1)(ii)-(iv).

[18] *O'Shea v. Littleton,* 414 U.S. 488, 494 (1974).

[19] *National Wildlife Federation v. Hodel,* 839 F.2d 694, 705 (D.C. Cir. 1988); *Lujan v. Defenders of Wildlife,* 504 U.S. 555, 560-61 (1992) (must be likely, as opposed to merely speculative, the injury will be redressed by a favorable decision).

[20] *See Public Service Co. of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), CLI-80-10, 11 NRC 438, 439 (1980).

[21] *International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 252 (2001).

[22] *Northern States Power Co.* (Monticello Nuclear Generating Plant; Prairie Island Nuclear Generating Plant, Units 1 and 2; Prairie Island Independent Spent Fuel Storage Installation), CLI-00-14, 52 NRC 37, 47 (2000).

behalf.[23] A petitioner may not simply assert interests of third persons as a basis for standing.[24]

In determining whether NAWO has demonstrated standing, we must determine whether a cognizable interest of the petitioner organization, or of one of its specifically identified members, will be adversely affected if the proceeding has one outcome rather than another.[25] More specifically, we must determine whether NAWO has demonstrated such a personal stake, on behalf of itself or its member(s), in the outcome of this proceeding as to show that a concrete adverseness exists that will sharpen the presentation of issues.[26]

In its request for hearing, NAWO represents that ''it is a member of the community that consumes electricity generated by the Monticello Reactor'' and that it ''is geographically located in the region that will be adversely impacted if or when the Monticello Reactor experiences a significant event.''[27] In addition, NAWO represents that it ''has a deep history of involvement with commercial nuclear operations from a public interest perspective'' and that ''the decision made in this proceeding has the possible effect . . . of transforming the broader community in which NAWO personnel live and work into an abandoned sacrifice zone.''[28] In its request for hearing, however, we are not told anything specific about NAWO or its members. We are not told how many members or employees NAWO has. We are not told how many, if any, of its members or employees live or work within 5 miles, 50 miles, or 500 miles of the MNGP. The only biographical information that NAWO supplied in its pleadings is the name of its Executive Director, and a P.O. Box in Lake Elmo, Minnesota, which it provided as a return address for mail delivery.[29]

We accept that NAWO has a general interest in effective and efficient regulation of the nuclear power industry, has been engaged in past NRC actions, and has shown a keen interest in NRC proceedings.[30] What Petitioner has not shown, however, is that it, or any of its members, would suffer a concrete and

---

[23] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 323 (1999).

[24] *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-94-3, 39 NRC 95, 102 n.10 (1994).

[25] *See Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 69 (1994); *Nuclear Engineering Co.* (Sheffield, Illinois, Low-Level Radioactive Waste Disposal Site), ALAB-473, 7 NRC 737, 743 (1978).

[26] *Duke Power Co. v. Carolina Environmental Study Group, Inc.,* 438 U.S. 59, 72 (1978); *see also Baker v. Carr,* 369 U.S. 186, 204 (1962).

[27] NAWO Petition at 1.

[28] *Id.*

[29] *Id.* at 7.

[30] *Id.* at 1-2, 6.

particularized harm if the proposed action were permitted.[31] It has not shown that an adverse ruling by this Board in this proceeding would result in an ''injury in fact'' to it or to its members.[32] It has not established that it, or its members, have a ''direct stake'' in the outcome of this proceeding that is greater than that of any other resident that consumes electricity generated by the Monticello plant.[33] As the Commission has stated, ''a 'generalized grievance' shared in substantially equal measure by all or a large class of citizens will not result in a distinct and palpable harm sufficient to support standing.''[34] Likewise, an allegation of ''special interest'' without a showing of ''particularized harm'' is insufficient to establish standing.[35] Thus, Petitioner's interest in nuclear safety, ''no matter how longstanding the interest and no matter how qualified the organization is in evaluating the problem, is not sufficient by itself to render [it] 'adversely affected' . . . .''[36]

Moreover, Petitioner has made no effort to demonstrate its authority to intervene and request a hearing on behalf of a NAWO member. Not only has NAWO failed to provide an affidavit or other express delegation of authority from any individual to represent it before this Board, NAWO has failed to identify any individual whose interests it seeks to represent. If we were to find that such a vague and cursory showing established standing, it would render section 2.309(d) virtually meaningless. Even construing the intervention petition in the light most favorable to NAWO,[37] we conclude that it has not met the standing requirements of 10 C.F.R. § 2.309(d) and that, accordingly, it cannot be admitted as a party to this proceeding.

---

[31] *See Sequoyah Fuels Corp.,* CLI-94-12, 40 NRC at 72; *see also International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-98-6, 47 NRC 116, 117 (1998).

[32] *Consumers Power Co.* (Palisades Nuclear Plant), LBP-79-20, 10 NRC 108, 112-13 (1979).

[33] *See Houston Lighting and Power Co.* (South Texas Project, Units 1 and 2), LBP-79-10, 9 NRC 439, 448, *aff'd,* ALAB-549, 9 NRC 644 (1979); *see also Sierra Club v. Morton,* 405 U.S. 727, 740 (1972).

[34] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), CLI-83-25, 18 NRC 327, 333 (1983).

[35] *Puget Sound Power and Light Co.* (Skagit/Hanford Nuclear Power Project, Units 1 and 2), LBP-82-74, 16 NRC 981, 983 (1982).

[36] *Sierra Club v. Morton,* 405 U.S. at 739-40; *see also Allied-General Nuclear Services* (Barnwell Fuel Receiving and Storage Station), ALAB-328, 3 NRC 420, 421 (1976).

[37] *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995).

B. Standards Governing Contention Admissibility[38]

The requirements that must be met if a contention is to be admitted are set out in 10 C.F.R. § 2.309(f). Pursuant to that regulation, an admissible contention must (1) provide a specific statement of the legal or factual issue sought to be raised; (2) provide a brief explanation of the basis for the contention; (3) demonstrate that the issue raised is within the scope of the proceeding; (4) demonstrate that the issue raised is material to the findings the NRC must make to support the action involved in the proceeding; (5) provide a concise statement of the alleged facts or expert opinions, including references to specific sources and documents that support the petitioner's position and upon which the petitioner intends to rely at hearing; and (6) provide sufficient information to show that a genuine dispute exists with regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief.[39]

The purpose of the contention rule, 10 C.F.R. § 2.309(f), is to ''focus litigation on concrete issues and result in a clearer and more focused record for decision.''[40] The Commission has stated that it ''should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing.''[41] The Commission has emphasized that the rules on contention admissibility are ''strict by design.''[42] Failure to comply with any of these requirements is grounds for the dismissal of a contention.[43]

The application of these requirements has been further developed as summarized below.

---

[38] Notwithstanding that we have found NAWO has failed to demonstrate the requisite standing to be admitted as a party to this proceeding, because Petitioner is proceeding *pro se,* we have examined its proposed contentions in detail and conclude, as more fully set out in the text of this Memorandum and Order, that even if NAWO had demonstrated standing none of its proposed contentions would be admissible.

[39] 10 C.F.R. § 2.309(f)(1)(i)-(vi).

[40] 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004). *See also Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.,* 435 U.S. 519, 553-54 (1978); *Business and Professional People for the Public Interest v. AEC,* 502 F.2d 424, 428 (D.C. Cir. 1974); *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20 (1974).

[41] 69 Fed. Reg. at 2202.

[42] *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001), *petition for reconsideration denied,* CLI-02-1, 55 NRC 1 (2002).

[43] 69 Fed. Reg. at 2221. *See also Private Fuel Storage,* CLI-99-10, 49 NRC at 325; *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155-56 (1991).

1. Brief Explanation of the Basis for the Contention

A ''brief explanation of the basis for the contention'' is a necessary prerequisite for an admissible contention.[44] ''[A] petitioner must provide some sort of minimal basis indicating the potential validity of the contention.''[45] The brief explanation helps define the scope of a contention — ''[t]he reach of a contention necessarily hinges upon its terms coupled with its stated bases.''[46]

2. Within the Scope of the Proceeding

A petitioner must demonstrate that the ''issue raised in the contention is within the scope of the proceeding,''[47] which is defined by the Commission in its initial hearing notice and order referring the proceeding to the Licensing Board.[48] Any contention that falls outside the specified scope of the proceeding must be rejected.[49] Given that an operating license renewal for a nuclear generating plant is the genesis of this proceeding, the review of technical issues in this proceeding will generally be limited to a review of plant structures and components that will require an aging management review for the proposed extended period of operation, 10 C.F.R. §§ 54.21, 54.22, 54.29, and the review of environmental issues will be limited by 10 C.F.R. §§ 51.53(c), 51.71(d), 51.95(c), 54.23. Accordingly, issues relating to any other matters are outside the scope of this proceeding, and cannot serve as the basis for an admissible contention.

3. Materiality

To proffer an admissible contention, a petitioner must demonstrate that the contention asserts an issue of law or fact that is ''material to the findings the NRC must make to support the action that is involved in the proceeding'';[50] that is, the petitioner must demonstrate that the subject matter of the contention would impact the grant or denial of a pending license application. ''Materiality'' requires that the petitioner show why the alleged error or omission is of possible significance

---

[44] 10 C.F.R. § 2.309(f)(1)(ii).

[45] 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989).

[46] *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 (1988), *aff'd sub nom. Massachusetts v. NRC,* 924 F.2d 311 (D.C. Cir. 1991), *cert. denied,* 502 U.S. 899 (1991); *see also Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 (2002).

[47] 10 C.F.R. § 2.309(f)(1)(iii).

[48] *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985).

[49] *Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289-90 n.6 (1979).

[50] 10 C.F.R. § 2.309(f)(1)(iv).

to the result of the proceeding. This means that there must be some significant link between the claimed deficiency and either the health and safety of the public, or the environment.[51]

4. Concise Allegation of Supporting Facts or Expert Opinion

Contentions must be supported by ''a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue . . . together with references to the specific sources and documents on which [it] intends to rely to support its position.''[52] It is the obligation of a petitioner to present the factual information and expert opinions necessary to adequately support its contention.[53] Failure to do so requires that the contention be rejected.[54]

Determining whether a contention is adequately supported by a concise allegation of the facts or expert opinion does not require the equivalent of a hearing on the merits.[55] A petitioner does not have to prove its contention at the admissibility stage. However, supporting material provided by a petitioner, including those portions of the material that are not relied upon, is subject to Board scrutiny.[56] The contention admissibility threshold is less than is required at the summary disposition stage[57] and, although a ''Board may appropriately view petitioners' support for its contention in a light that is favorable to the petitioner,''[58] a petitioner must provide some support for his contention, either in the form of facts or expert testimony.

Mere ''notice pleading'' is insufficient. A petitioner's contention will be inadmissible if the petitioner ''has offered no tangible information, no experts,

---

[51] *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 75 (1996), *rev'd in part on other grounds,* CLI-96-7, 43 NRC 235 (1996); *see also Portland Cement Association v. Ruckelshaus,* 486 F.2d 375, 394 (D.C. Cir. 1973), *cert. denied sub nom. Portland Cement Corp. v. Administrator, Environmental Protection Agency,* 417 U.S. 921 (1974); *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 439-41 (2002), *petition for review denied,* CLI-03-12, 58 NRC 185, 191 (2003).

[52] 10 C.F.R. § 2.309(f)(1)(v).

[53] *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 305, *vacated in part and remanded on other grounds,* CLI-95-10, 42 NRC 1, *and aff'd in part,* CLI-95-12, 42 NRC 111 (1995).

[54] *Palo Verde,* CLI-91-12, 34 NRC at 155.

[55] *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-106, 16 NRC 1649, 1654 (1982).

[56] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139 (2004); *Yankee Nuclear,* LBP-96-2, 43 NRC at 90.

[57] *See* 10 C.F.R. § 2.710(c). ''[A]t the contention filing stage the factual support necessary to show that a genuine dispute exists need not be in affidavit or formal evidentiary form and need not be of the quality necessary to withstand a summary disposition motion.'' 54 Fed. Reg. at 33,171.

[58] *Palo Verde,* CLI 91-12, 34 NRC at 155.

no substantive affidavits,'' but instead only ''bare assertions and speculation.''[59] Further, if a petitioner neglects to provide the requisite support for its contentions, the Board should not make assumptions of fact that favor the petitioner, or supply information that is lacking.[60] Likewise, providing any material or document as a basis for a contention, without setting forth an explanation of its significance, is inadequate to support the admission of the contention.[61]

In short, the information, facts, and expert opinions provided by the petitioner will be examined by the Board to confirm that they do indeed supply adequate support for the contention.[62] Nevertheless, at the contention admissibility stage all that is required is that the petitioner provide ''some alleged fact, or facts, in support of its position.''[63]

5. Genuine Dispute Regarding Specific Portions of Application

All contentions must ''show that a genuine dispute exists'' with regard to the license application in question, identify and challenge either specific portions of, or alleged omissions from, the application, and provide the supporting reasons for each dispute.[64] Any contention that fails directly to controvert the application, or that mistakenly asserts that the application does not address a relevant issue, may be dismissed.[65]

6. Challenges to NRC Regulations

In addition to the requirements set out above, with limited exceptions not applicable in this case, ''no rule or regulation of the Commission . . . is subject

---

[59] *See Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003) (citing *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 208 (2000)); *see also National Enrichment Facility,* LBP-04-14, 60 NRC at 55.

[60] *Georgia Tech,* LBP-95-6, 41 NRC at 305; *see also Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 422 (2001).

[61] *See Fansteel,* CLI-03-13, 58 NRC at 205.

[62] *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part on other grounds and remanded,* CLI-90-4, 31 NRC 333 (1990).

[63] 54 Fed. Reg. at 33,170 (''This requirement does not call upon the intervenor to make its case at this stage of the proceeding, but rather to indicate what facts or expert opinions, be it one fact or opinion or many, of which it is aware at that point in time which provide the basis for its contention'').

[64] 10 C.F.R. § 2.309(f)(1)(vi).

[65] *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 247-48 (1993), *review declined,* CLI-94-2, 39 NRC 91 (1994); *see also Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992).

to attack . . . in any [NRC] adjudicatory proceeding.''[66] By the same token, any contention that amounts to an attack on applicable statutory requirements or represents a challenge to the basic structure of the Commission's regulatory process must be rejected by a Licensing Board as outside the scope of its proceeding.[67] The NRC adjudicatory process is not the proper venue for the evaluation of a petitioner's personal view regarding the direction regulatory policy should take.[68]

Applying the above-stated standards, our rulings on NAWO's various contentions are outlined below.

C. Rulings on NAWO Contentions

1. NAWO Contention No. 1

''The No Action Alternative and Alternative Options for Providing Electrical Utility Services Are Not Adequately Addressed.''[69]

The first contention addresses the ''no-action alternative'' and ''alternative options'' analysis requirements imposed by 10 C.F.R. §§ 51.45(b)(3), 51.53(c)(2), and NEPA. NAWO asserts that throughout the life of the license renewal period, Community-Based Energy Development (C-BED) energy projects will be viable alternatives to nuclear power and will ''out-perform Monticello.''[70] Petitioner proceeds to explain the perceived virtues of the C-BED projects, including the backing of the Minnesota state government.[71]

As the basis for this contention, NAWO suggests that the energy capacity provided by MNGP during the license renewal period will be replaced by C-BED alternative energy projects in the region, specifically by wind/biofuel combustion hybrid facilities. NAWO states that C-BED ''is a statutory provision that establishes a framework within which all electric utilities serving loads in Minnesota will negotiate power purchase agreements with qualifying owners'' of locally owned, distributed, and dispersed renewable energy projects.[72] In addition to replacing NMC energy generating capacity, NAWO asserts that these new energy sources will ''significantly diminish or eliminate waste management and public

---

[66] 10 C.F.R. § 2.335(a); *see also Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 218 (2003).

[67] *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-76, 16 NRC 1029, 1035 (1982) (citing *Peach Bottom,* ALAB-216, 8 AEC at 20-21).

[68] *Peach Bottom,* ALAB-216, 8 AEC at 21 n.33.

[69] NAWO Petition at 2.

[70] *Id.*

[71] *Id.* at 3.

[72] *Id.* at 2.

health and safety issues,'' and ''provide dramatically enhanced local economic development value to the regional economy.''[73]

NAWO's discussion of proposed C-BED projects does not, however, provide any specific information to assess the extent of the program, its specific mission and authority, or its potential effectiveness in developing alternative energy sources. In proposing C-BED projects, NAWO does not provide any factual information or expert opinion that supports the potential for wind/biofuel combustion hybrid facilities to provide for the loss of baseload capacity provided by the MNGP should the license not be renewed.

As noted above, a contention is inadmissible if it does not include expert testimony, tangible information, or substantive affidavits, but instead, contains only ''bare assertions and speculation.''[74] Failure to provide such facts or expert opinions does not satisfy section 2.309(f)(1)(v) and, accordingly, is insufficient to support the admissibility of a contention.

Failing to supply adequate factual support for this contention, NAWO also fails to address that NMC did, in fact, discuss alternatives to the proposed action, and analyzed the environmental effects of those alternatives in section 7 of the ER.[75] NMC divided its discussion of alternatives into two categories: (1) the ''no-action'' alternative, and (2) other alternatives that meet system generating needs. In ER section 7.1, NMC addresses the ''no-action'' alternative by evaluating the potential environmental impacts of not renewing the MNGP operating license (i.e., ecological and socioeconomic impacts from decommissioning). This discussion is independent of actions to replace or compensate for the loss of generating capacity. NMC went on in ER section 7.2 to describe feasible options for replacing the baseload power (i.e., purchased power, natural-gas-fired generation, and coal-fired generation). NMC also discussed alternatives that it deemed unreasonable, such as: (a) generating options including wind and biomass, among others (Table 7.2-3); (b) delayed retirement of existing nonnuclear units; and (c) demand-side management. ER section 7.3 discussed the environmental impacts of the reasonable options for energy replacement.

An applicant for a license renewal is required to prepare an ER which, among other things, must discuss the environmental impacts of its proposed action (including modifications directly affecting the environment or affecting plant effluents) and compare these impacts to alternatives,[76] including the ''no-action''

---

[73] *Id.*

[74] *Fansteel,* CLI-03-13, 58 NRC at 203 (citing *Oyster Creek,* CLI-00-6, 51 NRC at 208).

[75] Monticello Nuclear Generating Plant Application for Renewed Operating License, Appendix E — Environmental Report, section 7 (Mar. 16, 2005), ADAMS Accession No. ML050880250 [hereinafter NMC ER].

[76] 10 C.F.R. §§ 51.45, 51.53(c).

alternative.[77] The discussion of alternatives must be ''sufficiently complete to aid the Commission in developing and exploring, pursuant to section 102(2)(E) of NEPA, 'appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.' ''[78] In this regard, there is no requirement for an applicant to look at every conceivable alternative to its proposed action.[79] NEPA only requires consideration of reasonable alternatives[80] (i.e., those that are feasible and nonspeculative).[81]

While an applicant cannot define a project so narrowly as to eliminate the NRC's consideration of the full range of ''reasonable alternatives'' in the environmental impact statement (EIS),[82] a rule of reason governs which alternatives the applicant must discuss in the ER and the extent to which it must discuss them.[83] The Commission need only consider the range of alternatives '' 'reasonably related' to the scope and goals of the proposed action''[84] (which, for MNGP, is to provide baseload generating capacity) and the ''no-action'' alternative.[85] NMC has submitted information concerning the ''no-action'' alternative and other alternatives it finds reasonable and feasible to achieving its goals. Because there is no requirement for NMC to address every conceivable option, especially one as vague and speculative as C-BED alternative energy options proposed by NAWO, nothing more is required of the Applicant.

NMC presented a discussion of alternatives in its ER as required by the regulations. 10 C.F.R. §§ 51.53(c), 51.45. The issue then is one of adequacy. NAWO implies only that the application is inadequate because the ER failed to consider C-BED options, which will be ''dominated by wind/bio-fuel combustion hybrid facilities.''[86] While the Applicant presented numerous alternatives in its

---

[77] 10 C.F.R. § 54.23, Part 51, App. A; *see also* 40 C.F.R. § 1502.14(d).

[78] 10 C.F.R. § 51.45(b)(3).

[79] *See Vermont Yankee,* 435 U.S. at 551.

[80] *Natural Resources Defense Council, Inc. v. Morton,* 458 F.2d 827, 834, 837 (D.C. Cir. 1972).

[81] *City of Carmel-by-the-Sea v. Department of Transportation,* 123 F.3d 1142, 1155 (9th Cir. 1997); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 65 (1991).

[82] *Simmons v. U.S. Army Corps of Engineers,* 120 F.3d 664, 666 (7th Cir. 1997).

[83] *Citizens Against Burlington v. Busey,* 938 F.2d 190, 195 (D.C. Cir.) (stating that the agency should ''accord substantial weight to the preferences of the applicant and/or sponsor''), *cert. denied,* 502 U.S. 994 (1991).

[84] *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-93-3, 37 NRC 135, 144-45 (1993) (citing *Process Gas Consumers Group v. U.S. Department of Agriculture,* 694 F.2d 728, 769 (D.C. Cir. 1981)); *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 55 (2001) (citing *Busey,* 938 F.2d at 195).

[85] 10 C.F.R. Part 51, App. A; *see also* 40 C.F.R. § 1502.14(d).

[86] NAWO Petition at 2.

ER, including wind and biomass options, NAWO fails to identify any specific error in NMC's discussion of these alternatives and has, therefore, failed to raise a genuine issue with regard to any material fact or law as required by the regulations. 10 C.F.R. § 2.309(f)(1)(vi). With regard to the alleged omission of an appropriate discussion of C-BED options, NAWO's contention is not supported by facts or expert opinion and is too speculative to raise a genuine issue of law or fact.

In summary, NAWO has failed to provide a concise statement of alleged facts or expert opinions required by section 2.309(f)(1)(v), and has not provided sufficient information to show that a genuine dispute exists as required by section 2.309(f)(1)(vi). For these reasons, NAWO Contention No. 1 is not admissible.

2. NAWO Contention No. 2

''No Safe Dose of Radiation; Radiation Monitoring Is Not Sufficient.''[87]

NAWO contends that there is no ''threshold of exposure below which ionizing radiation can be demonstrated to be harmless'' and that the radiation monitoring at Monticello is insufficient to ''establish where reported radiation releases go.''[88] Petitioners argue that because there is ''no safe dose'' of ionizing radiation and the current monitoring procedures cannot identify the location of released radiation, Monticello will pose a threat to the public health and safety and, accordingly, the MNGP operating license should not be renewed.[89]

NAWO's second contention, like its first, fails to meet the pleading requirements of 10 C.F.R. Part 2. NAWO's contention asserts that ''radiation monitoring at Monticello is not adequate'' and calls for new monitoring techniques.[90] Radiation monitoring programs, however, are subject to ongoing regulatory oversight, are not related to the detrimental effects of aging and, therefore, are beyond the scope of this proceeding.[91]

In addition, NMC is bound by the NRC regulatory requirements for radiation monitoring, as provided for in 10 C.F.R. Part 20 and Part 50.[92] The adequacy of these regulations cannot be adjudicated in this proceeding. Specifically:

---

[87] *Id.* at 3.

[88] *Id.*

[89] *Id.*

[90] *Id.*

[91] *See Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 163-64, *aff'd,* CLI-01-17, 54 NRC 3, 15-16 (2001).

[92] *See* 10 C.F.R. §§ 20.1002, 20.1101(a), & 50.36a.

> [N]o rule or regulation of the Commission, or any provision thereof, concerning the licensing of production and utilization facilities, source material, special nuclear material, or byproduct material, is subject to attack by way of discovery, proof, argument, or other means in any adjudicatory proceeding.[93]

Therefore, because NAWO's radiation monitoring contention calls for a change in the NRC's regulatory requirements, for this additional reason NAWO Contention No. 2 is outside the scope of this proceeding.[94]

In summary, this contention is beyond the scope of this proceeding, is an impermissible attack on NRC regulations as proscribed by 10 C.F.R. § 2.335(a), and fails to establish that a genuine dispute exists as to any issue of law or fact that is material to this proceeding. 10 C.F.R. § 2.309(f)(1)(ii)-(vi). For these reasons, NAWO Contention No. 2 is not admissible.

3. NAWO Contention No. 3

''Security Is Not Sufficient.''[95]

NAWO contends that ''security at Monticello is primarily a public relations affair.''[96] More specifically, NAWO claims that NMC is unable ''to adequately defend the Monticello Nuclear Generating Plant from a reasonably postulated 'force on force' attack, or from a very plausible stand off attack . . . .''[97] NAWO describes attacks from ''land and/or water by 20 well-armed and well informed intruders,'' and alleges that the LA's ''design basis threat'' is inadequate.[98]

The third NAWO contention similarly fails to meet the pleading requirements of 10 C.F.R. Part 2, by raising issues that are beyond the scope of the proceeding, fail to establish the existence of a genuine dispute on a material issue of law or fact, and lack the requisite factual or expert opinion support.

The contention's discussion of ''9/11'' and ''a stand-off attack'' raises terrorism issues which the Commission has found to be insufficiently related to the effects of plant aging to be material to, or admissible in, a license renewal proceeding.[99] Accordingly, they are not within the scope of this proceeding. To

---

[93] 10 C.F.R. § 2.335(a).

[94] *Id.; see also Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1) CLI-87-12, 26 NRC 383, 395 (1987).

[95] NAWO Petition at 3.

[96] *Id.* at 4.

[97] *Id.*

[98] *Id.*

[99] *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-26, 56 NRC 358, 364 (2002); *see also Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340 (2002).

the extent that this contention attempts to raise NEPA-related terrorism issues, the Commission has ruled that an EIS is not an appropriate place to address such issues.[100] Therefore, NMC's ER is not inadequate in this regard. For these reasons, NAWO Contention No. 3 is not admissible.

4. NAWO Contention No. 4

''Reactor Aging Problems Will Escape Detection Until Too Late.''[101]

NAWO contends that the LA ''does not contain adequate assurance that all components needing to be inspected and maintained will actually be subject to inspection and maintenance in a timely manner.''[102] NAWO further contends that there is a need to inspect all reactor components ''within the right time-frame,''[103] and calls for '' 'out-of-scope' pipe replacement, with testing to failure of replaced piping in multiple failure modes, so that reactor operators can know better ahead of time where weak spots need to be reinforced or replaced.''[104]

This contention generally questions the LA's treatment of component inspection and testing, and offers to provide expert testimony ''regarding diverse inspection methods that look at the right components with the right techniques at the right time.''[105] NAWO does not, however, adequately explain why it believes that NMC's LA is deficient in this regard. NAWO's contention is vague and speculative, and lacks expert opinion, documents, or sources to support it. This contention is therefore inadmissible because it presents nothing more than an unsupported conclusion.[106]

In addition, through this contention NAWO attempts to bring reactor components, which are subject to routine monitoring and oversight, into the license renewal review. These component issues are, however, everyday operating issues that are unrelated to an aging analysis of the plant's structures, systems, and components. To the extent this contention suggests that required inspection and maintenance is inadequate, it impermissibly attacks Commission regulations.[107]

As with the previous contentions, NAWO's fourth contention has failed to meet the pleading requirements of 10 C.F.R. Part 2. The contention is not supported by facts or expert opinion, fails to raise a genuine dispute with regard to any material

---

[100] *McGuire,* CLI-02-26, 56 NRC at 365.

[101] NAWO Petition at 4.

[102] *Id.*

[103] *Id.*

[104] *Id.*

[105] *Id.*

[106] 10 C.F.R. § 2.309(f)(1)(v).

[107] 10 C.F.R. § 2.335(a).

issue of law or fact, and impermissibly attacks Commission regulations. For these reasons, NAWO Contention No. 4 is not admissible.

5. NAWO Contention No. 5

''Drinking Water for Minneapolis and St. Paul Is Not Adequately Safeguarded, and Remediation Plans in the Event of Contamination Do Not Exist.''[108]

In its petition, NAWO contends that NMC's relicensing application fails to address possible events such as reactor component failures, operator errors, and sabotage, that could lead to contamination of the Mississippi River. NAWO also contends that NMC's LA is inadequate because it does not include a remediation plan to address risks to the drinking water of the Minneapolis/St. Paul region.[109]

As an initial matter, it is unclear whether NAWO intends its Contention No. 5 as an environmental or as a safety contention. Reading the contention as a challenge to the environmental analysis performed in the application, the NRC Staff argues that the contention is outside the scope of the proceeding,[110] and that it attempts an impermissible ''reopening of the NRC's generic findings in the [Generic Environmental Impact Statement] GEIS.''[111] Alternatively, reading the contention as a safety issue, the Staff argues that it is beyond the scope of the proceeding and inadmissible under section 2.309(f)(1)(iii) and (vi).[112] The NRC Staff further asserts that the safety issues NAWO attempts to raise are related to Monticello's siting, not aging, and are therefore covered by 10 C.F.R. Part 100.[113]

NMC argues that this contention raises neither a relevant safety issue, because it is not related to the management of aging, nor a relevant environmental issue, since it is not within the scope of the Category 2 issues designated in the GEIS for license renewals. 10 C.F.R. § 51.53(c)(3). NMC goes on to point out that, as this contention relates to emergency preparedness, the Commission does not require existing emergency plans to be considered anew for renewal applications. In addition, to the extent that NAWO challenged the MNGP's existing emergency plan, it did not provide any evidence that the measures to protect water supplies from accidents provided in its existing plan are inadequate.[114]

In its reply comment, NAWO explains that its drinking water contention is related to aging ''in that certain passive components are not subject to any aging

---

[108] NAWO Petition at 5.
[109] *Id.*
[110] NRC Staff Answer at 25-27.
[111] *Id.* at 27.
[112] *Id.*
[113] *Id.* at 28.
[114] NMC Answer at 22-23.

management review process . . . , yet could fail causing site specific drinking water contamination issues . . . .''[115] Specifically, NAWO takes issue with the application's failure to discuss the effects of equipment aging on the following components: (1) ''pump mounting base plates, grout, or mounting hardware''; (2) ''mounting plates, grout, or mounting hardware'' for ''heat exchangers, compressors, tanks, turbines, and motors''; (3) ''valve steam and pump shaft packing''; (4) ''consumable items, including ''lubrication media such as oils and greases''; and (5) ''valve internals flow isolation sealing subcomponents such as valve discs, plugs, or gates . . . .''[116]

The NRC Staff, in a motion to strike, suggests that the five deficiencies listed by NAWO in its reply are new issues ''unassociated with the arguments raised in the Answers of the Staff and NMC.''[117] Relying on the Commission's ruling in *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223 (2004), and its interpretation of 10 C.F.R. § 2.309(h)(2), the NRC Staff would have the Board find that these allegations are beyond the scope of a reply brief.[118] We do not believe, however, that NAWO raised new issues in its reply. Factoring into our analysis that NAWO is proceeding *pro se,* we believe that the NAWO reply properly explains that its original contention is related to the aging of plant components, provides more specificity with regard to equipment that it believes should be included in the aging analysis, and does not impermissibly raise new issues.[119] Accordingly we *deny* the NRC Staff's motion to strike, and we have fully considered NAWO's reply in reaching our decision on the admissibility of its contentions.

We find it difficult, however, to understand NAWO's argument in support of this contention from its vague, general statements.[120] It was not clear to us whether the broad and speculative events presented by NAWO in its initial petition were accidents (i.e., environmental issues) or rather equipment malfunctions that might result from inadequate time-limited aging analyses (i.e., safety issues). In its reply, NAWO seems to clarify that this contention relates to the aging management review process.[121] As such, we focus our review on drinking water impacts that might result from aging systems, structures, and components within the scope of

---

[115] NAWO Reply at 2.

[116] *Id.* at 2-9.

[117] NRC Staff Motion To Strike at 4.

[118] *Id.* at 4-5.

[119] *See Salem Nuclear Generating Station,* ALAB-136, 6 AEC at 489; *White Mesa Uranium Mill,* LBP-01-8, 53 NRC at 207-08.

[120] Since NAWO did not adequately explain the basis for this contention, it could be dismissed as not meeting the requirements of 10 C.F.R. § 2.309(f)(1)(ii).

[121] NAWO Reply at 2.

the renewal regulation, 10 C.F.R. §§ 54.4, 54.21, and provide a more abbreviated discussion of the contention relative to NMC's evaluation of accidents.[122]

With regard to the safety aspects, NAWO provides no specific information to support its allegations (e.g., a description of the drinking water sources, information showing that it is the major source for the Twin Cities, a discussion of the potential aging events at the MNGP that might cause a drinking water impact, a link between these events and the resulting concentration levels of drinking water contamination, or a demonstration that these levels pose a health risk). NAWO initially provided only a vague description of a ''variety of reactor component failures, operator errors, and sabotage'' that might cause water quality impacts by undisclosed means.[123] In its reply, NAWO is somewhat more specific in listing numerous passive components that it alleges fall within the scope of 10 C.F.R. Part 54, which have not been included in the aging management program by NMC, and might fail and lead to drinking water impacts for the Twin Cities.[124]

In neither of its submittals, however, does NAWO provide any evidence to support its argument that the referenced equipment is related to the structure and components delineated in 10 C.F.R. § 54.4(a), and thus subject to an aging management review. In addition, NAWO does not provide any support for the proposition that aging during the renewal period might cause failure or, if failure occurs, that such failure would lead to drinking water impacts to the extent that public safety is jeopardized. Without adequate facts or expert opinion to support its argument, NAWO fails to demonstrate that a genuine dispute exists with regard to this issue. As such, this contention must be dismissed for not meeting the requirements of 10 C.F.R. § 2.309(f)(1)(v) and (vi).

NAWO further states that it will present testimony regarding the potential for events to occur during the relicense period (that will threaten the drinking water for the Twin Cities area), the consequences should such event occur, and the need to develop remediation plans as a condition for relicensing.[125] While NAWO makes this offer for the future, to be admitted this contention must be supported *at this point* of the proceeding by some specifics as to alleged facts or expert opinions and references to the specific sources and documents.[126] In its petition, however, NAWO provides only bare assertions, unsupported by expert opinion or relevant documentary material, that drinking water supplies will be contaminated by undefined equipment failures from a plethora of speculative components at MNGP that are not linked to the cause of failure of, or subsequent impact to, the referenced water supplies. This does not meet the standards for admissibility.

---

[122] 10 C.F.R. § 51.53(c).

[123] NAWO Petition at 5.

[124] NAWO Reply at 2-9.

[125] NAWO Petition at 5.

[126] 10 C.F.R. § 2.309(f)(1)(v).

When viewed as an environmental contention, this contention also fails. To fall within the scope of this proceeding, events at the MNGP, which NAWO speculates could contaminate the Twin Cities' drinking water, would have to be either design-basis accidents or severe accidents. The environmental impacts for each of these scenarios, however, are evaluated in the GEIS for license renewals and considered to be of small risk for all plants including MNGP.[127] Any attempt by NAWO to allege that the Commission erred in the GEIS by assigning too small a risk to these accidents, or that NMC should address additional dose pathways for severe accidents constitutes an impermissible attack on the regulations. Since ''no rule or regulation of the Commission . . . is subject to attack . . . in any [NRC] adjudicatory proceeding,''[128] this contention must be rejected by this Licensing Board as not meeting 10 C.F.R. § 2.309(f)(1)(iii).

As required by the GEIS, NMC developed site-specific severe accident mitigation design alternatives (SAMDAs) for MNGP.[129] NAWO provides no facts or expert opinion that demonstrate a deficiency in NMC's SAMDAs and, as a result, has not shown that a genuine dispute exists on a material issue of law or fact. Since NAWO does not met the requirements of section 2.309(f)(1)(v), or demonstrate a genuine dispute required by section 2.309(f)(1)(vi), this contention may not be admitted as an environmental contention.

In summary, NAWO does not adequately explain the basis for this contention as required by section 2.309(f)(1)(ii), fails to provide a concise statement of alleged facts or expert opinions that support this contention as required by section 2.309(f)(1)(v), and does not provided sufficient information to show that a genuine dispute exists as required by section 2.309(f)(1)(vi). For these reasons, NAWO Contention No. 5 is not admissible.

6. NAWO Contention No. 6

''Inadequate Accounting of Reactor Operating Parameters in an Era of Global Warming.''[130]

NAWO contends that the LA does not address the effects of global warming on Monticello's operations.[131] Referring to possible deviations from the historical low flow occurrences, NAWO argues that ''climate change may diminish the ability of the River to accommodate Monticello nuclear operations more during

---

[127] 10 C.F.R. Part 51, Table B-1, Appendix B to Subpart A.

[128] 10 C.F.R. § 2.335(a). *See also Millstone Nuclear Power Station,* CLI-03-14, 58 NRC at 218.

[129] NMC ER § 4.17.

[130] NAWO Petition at 5.

[131] *Id.*

the re-license period than was the case in the past . . . .''[132] The Petitioner asserts that future climate change will inhibit Monticello's ability to protect public health, safety, and the environment.[133]

NAWO fails in this contention to identify any specific deficiencies in NMC's aging management programs that raise a valid safety issue. The contention does not discuss, or even identify, what operating parameters of the MNGP would be affected by global warming. Further, NAWO's climate change propositions are presented without any factual or expert support. For example, NAWO offers no support for its claim that nuclear operations in Europe have already been affected by climate change.[134] Finally, climate change is an issue of generic applicability to all nuclear plants and is, therefore, not a Category 2 environmental issue, or an issue of aging. Accordingly, it is not within the scope of this proceeding.

NAWO provides no factual or expert support indicating the potential validity of this contention, section 2.309(f)(1)(v), and fails to establish the existence of a genuine dispute on any material issue of law or fact that is of consequence in this proceeding, as required by section 2.309(f)(1)(vi). In addition, as noted above, the impact of climate change on the MNGP is not within the scope of this proceeding.[135] Accordingly, NAWO Contention No. 6 is not admissible.

7. NAWO Contention No. 7

''Severe Accident Mitigation Analysis Is Not Adequate.''[136]

NAWO contends that the Application's SAMA is ''unacceptably lacking in depth and thoroughness''[137] and that, as a result, if events occurred they would ''run their course amidst chaos throughout the affected regions.''[138] Specifically, NAWO contends that a ''lack of discussion regarding drinking water impacts,'' and issues relating to public notification and evacuation plans render the application inadequate.[139] NAWO claims that the fate of evacuees ''over the course of time is totally unexamined.''[140]

---

[132] *Id.*

[133] *Id.*

[134] *Id.*

[135] *See Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), LBP-02-4, 55 NRC 49, 88, *rev'd on other grounds,* CLI-02-14, 55 NRC 278, *and aff'd and rev'd on other grounds,* CLI-02-17, 56 NRC 1 (2002); *see also Turkey Point,* CLI-01-17, 54 NRC at 7-12.

[136] NAWO Petition at 5.

[137] *Id.*

[138] *Id.*

[139] *Id.* at 6.

[140] *Id.*

As with previous contentions, NAWO Contention No. 7 is outside the scope of the proceeding and lacks the necessary factual or expert support. In this contention NAWO references ''preparedness,'' ''public notification,'' and ''evacuation.''[141] Accordingly, we view this contention as primarily directed at emergency planning and response, despite a reference to the SAMA. Emergency planning issues, as discussed above, are inapplicable to license renewals and, therefore, are outside the scope of this proceeding.[142]

With regard to the SAMA, NAWO does not explain why any portion of NMC's analysis might be inadequate. NAWO alleges that NMC's ''lack of discussion regarding drinking water impacts on the Twin Cities is indicative of the Application's shallow preparedness for severe accident scenarios.''[143] NAWO, however, offers no discussion whatsoever of why it believes the analysis is inadequate, and it fails to discuss, or even mention, NMC's ER which references NUREG/CR-6613, Vol. 1 (1998), which identifies the code used to produce its probabilistic safety assessment for the MNGP. Thus, NAWO does not raise a genuine issue with regard to the adequacy of the SAMA. For these reasons, NAWO Contention No. 7 is not admissible.

III. CONCLUSION

For the reasons set forth above, we find that NAWO does not have standing under 10 C.F.R. § 2.309(d). In addition, we also find that NAWO has not submitted an admissible contention under 10 C.F.R. § 2.309(f). Accordingly, for both of these reasons NAWO's petition to intervene is *denied* and this proceeding is *terminated.* We have also, through this Memorandum and Order, *denied* the NRC Staff's motion to strike NAWO's reply, and *denied* NAWO's motion to find the application for relicensing the MNGP incomplete.

In accordance with the provisions of 10 C.F.R. § 2.311, any appeal to the Commission from this Memorandum and Order must be filed within ten (10) days after it is served.

---

[141] *Id.*

[142] *See* 10 C.F.R. § 50.47(a)(1); *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 640-41 (2004); *Turkey Point,* CLI-01-17, 54 NRC at 19; *see also Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-05-24, 62 NRC 551, 560-61 (2005).

[143] NAWO Petition at 5-6.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD[144]

Lawrence G. McDade, Chairman
ADMINISTRATIVE JUDGE

Richard E. Wardwell
ADMINISTRATIVE JUDGE

William M. Murphy
ADMINISTRATIVE JUDGE

Rockville, Maryland
November 1, 2005

[144] Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to: (1) Counsel for the Applicant NMC, David R. Lewis; (2) Counsel for the NRC Staff, Michael A. Woods; and (3) Petitioner NAWO c/o Executive Director, George Crocker.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

J.E. Dyer, Director

In the Matter of **Docket No. 50-271**
(License No. DPR-28)

ENTERGY NUCLEAR VERMONT YANKEE, LLC, and ENTERGY NUCLEAR OPERATIONS, INC.
(Vermont Yankee Nuclear Power Station)

November 7, 2005

The Petitioner requested that the Nuclear Regulatory Commission (NRC) take immediate and decisive action to address the degraded alert and notification system (ANS) at the Vermont Yankee Nuclear Power Station (Vermont Yankee). Specifically, the petition requested that the NRC order Vermont Yankee to go into cold shutdown and/or take other such action to restore reasonable assurance of adequate protection of public health and safety until Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (Entergy or the Licensee), have provided a workable emergency warning or alert system and the NRC has verified the operability of the system.

The final Director's Decision on this petition was issued on November 7, 2005. That Decision addresses several issues related to the emergency warning system, including: (1) route alerting requirements, and (2) route alerting capabilities, (3) tone-alert radios, and (4) Licensee performance.

With respect to the first issue, the NRC Staff concluded that for Vermont Yankee, backup route alerting completed within 45 minutes of detection of a failure of the primary ANS meets the intent for prompt public notification as required by 10 C.F.R. § 50.47(b)(5) and 10 C.F.R. Part 50, Appendix E, § IV.D.3.

With respect to the second issue, the NRC Staff concluded that there is reasonable assurance that the alert notification system (ANS) was adequate to

alert and promptly notify the public in the event of a radiological emergency at Vermont Yankee, based on FEMA's analysis of the Vermont Yankee ANS.

With respect to the third issue, the NRC Staff concluded that based on a preliminary review of the Licensee's proposed and completed corrective actions, there is reasonable assurance that the tone-alert radio program at Vermont Yankee will provide the necessary notifications. If any problems are identified during the supplemental inspection of the Licensee's corrective actions, they will be addressed in accordance with the Reactor Oversight Process.

With respect to the fourth issue, the NRC Staff concluded that no other action beyond the normal baseline inspection activities is needed at this time to address the Licensee's performance related to the Emergency Preparedness cornerstone, other than the supplemental inspection related to the White finding involving the tone-alert radio issue.

Consequently, the NRC denied the request to take enforcement action against the Licensee.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

I. INTRODUCTION

By letter dated December 7, 2004, Mr. Raymond Shadis of the New England Coalition (the Petitioner) filed a petition pursuant to Title 10 of the *Code of Federal Regulations* (10 C.F.R.), section 2.206. The Petitioner requested that the Nuclear Regulatory Commission (NRC or Commission) take immediate and decisive action to address the degraded alert and notification system (ANS) at the Vermont Yankee Nuclear Power Station (Vermont Yankee). Specifically, the petition requested that the NRC order Vermont Yankee to go into cold shutdown and/or take other such action to restore reasonable assurance of adequate protection of public health and safety until Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (Entergy or the Licensee), have provided a workable emergency warning or alert system and the NRC has verified the operability of the system. The petition included two other requests: (1) the NRC should review all inspection findings and Licensee documents on emergency response and notification to determine the extent of condition, including, but not limited to, the extent of condition as it affects emergency response, quality assurance, root-cause analysis, and the Licensee's corrective action program; and (2) the Licensee should arrange for an independent audit of the emergency response plan (including its assumptions, methodologies, and treatment of human and component performance failures) to determine the extent to which the plan is functional and provides reasonable assurance of adequate protection of the public

health and safety through the entire range of accidents assumed in 10 C.F.R. Part 50, Appendix E.

As a basis for the requests, the Petitioner cited concerns about tone-alert radios, route alerting, and Licensee performance.

The NRC's Petition Review Board (PRB) met on December 13, 2004, to discuss the request to immediately order the cold shutdown of Vermont Yankee because of the degraded condition of the ANS. NRC Staff responsible for reviewing emergency preparedness issues also participated in this meeting. The PRB determined that based on a recently completed inspection of the Vermont Yankee emergency preparedness program, documented in an inspection report dated November 12, 2004, the proposed immediate action was not necessary. As discussed in the inspection report, the NRC identified a violation of the emergency planning standard in 10 C.F.R. § 50.47(b)(5) because the Licensee's method of distributing tone-alert radios to members of the public outside the area covered by sirens did not meet the intent of the design basis for the ANS. However, the report concluded that this preliminary finding ''does not present an immediate safety concern because the licensee has informed the towns to be prepared to do route alerting to ensure that those residents outside of siren coverage are notified in the event of an emergency.''

Route alerting relies on emergency personnel from the affected towns notifying residents by public address systems on emergency vehicles. On December 13, 2004, following the PRB meeting, the NRC Staff notified the Petitioner by telephone that the NRC denied the request for immediate action, since there is no immediate safety concern according to the inspection report dated November 12, 2004.

In a teleconference on January 6, 2005, the Petitioner and two representatives from the organization Nuclear Free Vermont, Mr. Edward Anthes and Ms. Judy Davidson, provided information to the PRB as further explanation and support for the petition. The teleconference was transcribed and the transcription was treated as a supplement to the petition.

In an acknowledgment letter dated January 26, 2005, the NRC informed the Petitioner that the petition was accepted for review under 10 C.F.R. § 2.206 and had been referred to the Office of Nuclear Reactor Regulation for appropriate action.

Copies of the petition, transcript, and acknowledgment letter are available for inspection at the Commission's Public Document Room (PDR) at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland, and from the NRC's Agencywide Document Access and Management System (ADAMS) Public Electronic Reading Room on the NRC Web site at *http://www.nrc.gov/reading-rm/adams.html* under ADAMS Accession No. ML050180430. Persons who do not have access to ADAMS or who have problems in accessing the documents in ADAMS should contact the NRC PDR

reference staff by telephone at 1-800-397-4209 or 301-415-4737 or by e-mail to *pdr@ nrc.gov*.

By letter dated May 24, 2005, the NRC Staff sent copies of the proposed Director's Decision to the Petitioner and to Entergy and requested comments. By letter dated June 24, 2005, the Petitioner provided comments on the proposed Director's Decision. Those comments are addressed in this Director's Decision.

II. DISCUSSION

As a basis for the requested actions, the Petitioner raised several concerns about the Vermont Yankee ANS. These concerns and the NRC Staff's evaluation of the concerns are discussed below.

A. Route Alerting Requirements

1. Petitioner's Concerns

During the teleconference on January 6, 2005, the Petitioner questioned whether allowing up to 45 minutes for notification by route alerting meets the design objective of providing prompt public notification ''within about 15 minutes,'' as stated in 10 C.F.R. Part 50, Appendix E.

2. NRC Staff Evaluation

According to 10 C.F.R. § 50.54(q), nuclear power plant licensees shall follow and maintain in effect emergency plans that meet the standards in 10 C.F.R. § 50.47(b) and the requirements in 10 C.F.R. Part 50, Appendix E.

In accordance with 10 C.F.R. § 50.47(b)(5), the emergency response plan must establish ''means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone'' (i.e., the 10-mile emergency planning zone (EPZ)).

In 10 C.F.R. Part 50, Appendix E, § IV, details are provided on the information that emergency plans must contain to demonstrate compliance with the standards set forth in 10 C.F.R. § 50.47(b). Section IV.D.3 of Appendix E states that ''[t]he *design objective* of the prompt public notification system shall be to have the capability to *essentially* complete the *initial notification* of the public within the plume exposure pathway EPZ within *about* 15 minutes'' (emphasis added).

Regulatory Guide 1.101, ''Emergency Planning and Preparedness for Nuclear Power Reactors,'' Rev. 4 (July 2003), states that the criteria and recommendations in Revision 1 of NUREG-0654/FEMA-REP-1, ''Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in

Support of Nuclear Power Plants,'' dated November 1980, are acceptable to the NRC Staff for complying with the 10 C.F.R. § 50.47 standards that must be met in onsite and offsite emergency response plans.

NUREG-0654/FEMA-REP-1, Appendix 3, § B.2, gives the following minimum acceptable design objectives for coverage by the prompt notification system:

(a) Capability for providing both an alert signal and an informational or instructional message to the population on an areawide basis throughout the 10-mile EPZ, within 15 minutes.

(b) The initial notification system will assure direct coverage of essentially 100% of the population within 5 miles of the site.

(c) Special arrangements will be made to assure 100% coverage within 45 minutes of the population who may not have received the initial notification within the entire plume exposure EPZ.

Federal oversight of radiological emergency planning and preparedness for commercial nuclear facilities involves both the Federal Emergency Management Agency (FEMA) and the NRC. Consistent with President Carter's directive in December 1979 and the longstanding memorandum of understanding between FEMA and the NRC, FEMA takes the lead in reviewing and assessing offsite planning and response (including the ANS) and in assisting state and local governments, while the NRC reviews and assesses onsite planning and response. Using FEMA's input, the NRC then makes a determination on the overall state of emergency preparedness.

FEMA-REP-14, ''Radiological Emergency Preparedness Exercise Manual,'' dated September 1991, is used by FEMA Staff for planning, preparing, and evaluating radiological emergency preparedness (REP) exercises. Section D of FEMA-REP-14 provides an interpretation and application of the guidance in NUREG-0654/FEMA-REP-1 for each of the objectives in an REP exercise. Section D.10, ''Alert and Notification,'' provides guidance on demonstrating the capability to promptly alert and notify the public within the 10-mile EPZ. With respect to route alerting, the FEMA guidance provides various criteria, depending on the design objective of the route alerting. Three different design objectives for route alerting are discussed: (1) primary route alerting, (2) exception area route alerting, and (3) backup route alerting.

Primary route alerting refers to route alerting anywhere within the 10-mile EPZ that is credited as the primary method of alerting and notifying the public (e.g., in areas not covered by sirens). Primary route alerting should be completed within 15 minutes of the decision by authorized offsite officials to activate the ANS.

Exception area route alerting refers to route alerting in areas 5 to 10 miles from the nuclear plant (areas specified in the offsite response organization's (ORO's)

plan) to which the 15-minute alerting and notification does not apply. Exception areas are reviewed and approved by FEMA on a case-by-case basis. Generally, exception areas are remote areas, rural areas, open-water areas, rivers, hunting areas, recreational areas, private compounds, beaches, national forests, and other low-population areas that require special alerting and notification procedures. For this design objective, the route alerting should be completed within 45 minutes of the decision by authorized offsite officials to activate the ANS.

Backup route alerting refers to route alerting anywhere within the 10-mile EPZ and is used in the event of a failure of a part of the primary ANS (e.g., siren failure).

The Vermont Yankee ANS credits sirens and tone-alert radios as the primary methods for providing prompt public notification (i.e., primary route alerting is not credited). In addition, there are no FEMA-approved exception areas for Vermont Yankee. The only route alerting credited for the Vermont Yankee ANS is backup route alerting with prescribed routes, to be used in the event of a failure of a part of the primary ANS.

Based on the above, the NRC Staff concludes that for Vermont Yankee, backup route alerting completed within 45 minutes of detection of a failure of the primary ANS meets the intent for prompt public notification as required by 10 C.F.R. § 50.47(b)(5) and 10 C.F.R. Part 50, Appendix E, § IV.D.3.

As noted previously, the NRC identified a violation associated with the emergency planning standard in 10 C.F.R. § 50.47(b)(5) because the Licensee's method of distributing tone-alert radios to members of the public outside of siren coverage was not meeting the intent of the design basis for the ANS. As a compensatory measure, the Licensee notified the affected towns to be prepared to do route alerting. The Licensee took corrective actions and, as of March 31, 2005, had distributed tone-alert radios to all residents within the 10-mile EPZ that requested a radio.

B. Route Alerting Capabilities

1. Petitioner's Concerns

During the teleconference on January 6, 2005, the Petitioner and the representatives of Nuclear Free Vermont raised concerns about the ability of route alerting to provide the necessary notifications. Their concerns were that: (1) route alerting is not practical in poor weather (e.g., snow, ice, mud) since roads would be impassable; (2) the 45-minute time frame does not include the time needed to get to where the route starts but only the time a person takes to drive the route; (3) route alerting has no provisions for going up driveways and on private roads and getting to people who work outdoors (e.g., farmers, hikers, loggers); (4) it hasn't been demonstrated that route alerting works when people's windows are

closed in the winter, when they're watching television, or the stereo is on; (5) route alerting relies on volunteers and some towns don't have enough volunteers or vehicles to drive all the routes; (6) the FEMA drills only require that one route be completed, and this does not demonstrate that all routes can be completed; and (7) route alerting does not address the needs of the special-needs population (e.g., people who are deaf or cannot see an operator driving by or do not have transportation).

2. NRC Staff Evaluation

As noted previously, FEMA takes the lead in assessing offsite state and local planning and response, while the NRC assesses the onsite planning and response. Using FEMA's input, the NRC then makes a determination on the overall state of emergency preparedness.

In April 2003, FEMA conducted an exercise in the 10-mile EPZ around Vermont Yankee. The purpose of the exercise was to assess the level of state and local preparedness to respond to a radiological emergency. The exercise was held in accordance with FEMA's policies and guidance on the exercise of state and local radiological emergency response plans (RERPs) and procedures. During this exercise, FEMA evaluated the capability to perform route alerting within the required 45 minutes. A total of seventeen route alert routes were demonstrated (five in Vermont, five in New Hampshire, and seven in Massachusetts). All of the seventeen routes (one for each EPZ community) were completed in less than 45 minutes. No deficiencies were identified during the exercise in any of the areas evaluated, including route alerting. FEMA-REP-14 defines a deficiency as ''an observed or identified inadequacy of organization performance in an exercise that could cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant.'' Accordingly, FEMA concluded that the offsite RERPs and preparedness for the states of Vermont, New Hampshire, the Commonwealth of Massachusetts and their affected local jurisdictions site-specific to Vermont Yankee can be implemented and provide reasonable assurance that appropriate measures can be taken offsite to protect the health and safety of the public in the event of a radiological emergency at Vermont Yankee.

FEMA provided the following information on the Petitioner's concerns:

(1) FEMA assumes that the emergency vehicles are appropriate for the seasons and weather conditions in the region and can successfully complete routes under these conditions.

(2) The time frame for demonstrating route alerting begins when the local emergency operations center is notified that there has been a failure of a siren or a tone-alert transmitter.

(3) There are no specific requirements for how close the route-alerting vehicle must get to a residence (e.g., in the use of private roads and driveways). The driver is expected to follow the prescribed route.

(4) The sound levels considered acceptable for route alerting should be distinguishable from normal background levels (i.e., 10 decibels above background).

(5) Local OROs have identified in their RERPs the routes for notifying members of the public in the event of failure of the primary means of notification (i.e., sirens or tone-alert radios). OROs are expected to have emergency response personnel and vehicles available to perform route alerting, and, in the extremely unlikely event of failure of all sirens and radios, OROs would be expected to utilize the personnel and vehicles to notify the public as expeditiously as possible.

(6) A different route is demonstrated in each EPZ community at each biennial exercise, so that all routes are demonstrated over time.

(7) Cards are sent annually to all residents for special needs information. The responses are kept in a confidential database at local emergency operation centers. Special-needs coordinators notify these people as appropriate.

In a letter dated February 10, 1999, FEMA notified the NRC that it had completed an analysis of the Vermont Yankee ANS and determined that there was reasonable assurance that the system was adequate to alert and promptly notify the public in the event of a radiological emergency at Vermont Yankee. Based on recent discussions with the NRC Staff and taking the Petitioner's concerns into consideration, FEMA has reiterated the position stated in FEMA's February 10, 1999 letter.

Based on FEMA's input, the NRC Staff finds reasonable assurance that route alerting at Vermont Yankee will provide the necessary notifications. FEMA did identify deficiencies during the May 24, 2005, exercise; however, these deficiencies do not change the NRC's reasonable assurance finding. The deficiencies identified during the exercise have been corrected.

C. Tone-Alert Radios

1. Petitioner's Concerns

The petition asserted that ''many radios, if not most or all radios, are not working, are not receiving or annunciating a periodic test signal, and lack simple, inexpensive contemporary reliability and safety features.'' During the teleconference on January 6, 2005, the Petitioner and the representatives of Nuclear Free Vermont raised additional concerns pertaining to use of tone-alert radios: (1) a large segment of the population still doesn't have the tone-alert radios; (2) the radios warn of every weather event that's coming for 100 miles around (e.g., thunderstorms) and, therefore, people turn the radios off due to the frequent disturbances caused by the weather alerts; (3) there are problems with the radio battery backup system (the batteries don't hold a charge, so if the power goes out the people don't have usable radios); (4) individual citizens have too much responsibility (they must request a radio, maintain it, and get new batteries); (5) the radio instructions for programming the channel are too complicated; and (6) when the radio loses power, it loses its programming if the battery isn't sufficiently charged.

The petition also stated that ''in restoring the emergency notification system, if it is decided to continue with the radio alert systems, certain practicalities and improvements should be considered.'' The petitioners recommended that: (1) Licensee personnel periodically test the radios in their functional locations and conditions since the burden of checking radio batteries and replacing them falls to the affected public and many people forget to maintain their radios; (2) replacement radios should have a ''chirp'' function, similar to smoke detectors, to warn that batteries are low; (3) rugged waterproof compact radios should be provided to people who work outdoors; and (4) the distribution of new radios provides an opportunity for distributing potassium iodine tablets and printed emergency instructions.

2. NRC Staff Evaluation

As noted previously, the Vermont Yankee ANS credits sirens and tone-alert radios as the primary methods of prompt public notification. FEMA document FEMA-REP-10, ''Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants,'' dated November 1985, provides guidance for FEMA's review of the ANS-related aspects of state and local offsite radiological emergency plans. Chapter 1, section E.6.2, of FEMA-REP-10, elaborates on the acceptance criteria for meeting the design objectives for prompt public notification discussed in NUREG-0654/FEMA-REP-1, Appendix 3, § B.2. Specific acceptance criteria for tone-alert radios are provided in Chapter 1, § E.6.2.3, of FEMA-REP-10. Section E.6.2.3 states, in part, that:

Although absolute control of tone-alert radios is forfeited once they are given to the public for use in residences, the following steps can be taken to ensure that the public (in geographic areas where the radios are used as a primary alerting method) is offered the opportunity to benefit from the availability of tone-alert radios. At a minimum, an effective and continual tone-alert radio distribution and maintenance program should be established that includes the following:

- Tone-alert radios should be offered to the public in geographic areas (where needed) and a ''best-effort'' attempt must be made to place the radios. A record system (register) containing an accurate list of addresses (names are optional) must be maintained for these geographic areas using the tone-alert radios. The addresses of residents refusing tone-alert radios should also be noted.
- A maintenance program offering operating checks should be available at least annually to the public in geographic areas using the tone-alert radios. This maintenance program and the register program (mentioned above) may be integrated.
- Tests offering the public a means to self-test its receivers are desired at least monthly. However, a final determination of testing frequency rests with the appropriate state and local government officials. These test results need not be monitored.
- Written guidance should accompany the tone-alert radios. These instructions should address, where applicable, tone-alert radios:
  - General usage;
  - Self-testing frequency and method;
  - Suggested location (to facilitate efficient monitoring);
  - Maintenance program; and
  - Telephone numbers for repair or replacements.

  As a reminder, this written guidance should be provided annually to each tone-alert radio recipient. This portion of the tone-alert radio program may also be integrated with the register and maintenance programs (mentioned above).
- A determination should be made that the broadcast medium for initiating the tone-alert signal has adequate availability (24 hours a day, 7 days a week), signal strength, and signal quality.

When a tone-alert program (as defined above) has been implemented, NUREG-0654/FEMA-REP-1, Revision 1, criteria are satisfied for the tone-alert portion of an alert and notification system.

In a letter dated February 10, 1999, FEMA notified the NRC that it had completed an analysis of the Vermont Yankee ANS. The letter stated that the Vermont Yankee ANS satisfies the requirements of NUREG-0654/FEMA-REP-1, Rev. 1, and FEMA-REP-10. On this basis, FEMA's letter concluded that there is reasonable assurance that the system is adequate to alert and promptly notify the public in the event of a radiological emergency at Vermont Yankee. Enclosed with the letter was a report dated June 1996 titled ''Vermont Yankee Nuclear Power Station, Site-Specific Offsite Radiological Emergency Preparedness Alert and Notification System, Quality Assurance Verification.'' A section of the report analyzed the tone-alert radio part of the Vermont Yankee ANS. The report used the guidance in FEMA-43, which has since been superceded by FEMA-REP-10. However, the FEMA-43 guidance on tone-alert radios was nearly identical to the guidance in FEMA-REP-10. This report concluded that the tone-alert system developed for Vermont Yankee meets FEMA guidelines on tone-alert radio systems.

In October 2004, the NRC completed an inspection of the Vermont Yankee emergency preparedness program, as documented in an inspection report dated November 12, 2004. The inspection included a review of the overall status of the tone-alert radio program to ensure that the original ANS design criteria were still being met. The NRC identified a violation of the emergency planning standard in 10 C.F.R. § 50.47(b)(5) because the Licensee's method of distributing tone-alert radios to members of the public outside the areas covered by sirens did not meet the intent of the design basis for the ANS. Specifically, the NRC determined that Entergy did not have an active program in place to ensure that all residents outside of siren coverage who needed a tone-alert radio were offered one. Additionally, new residents to the EPZ (outside of siren coverage) might not have had an opportunity to receive tone-alert radios, and residents who had already received tone-alert radios might not be aware of efforts to maintain the radios. These conditions did not fulfill the design criteria used by FEMA when it accepted the Licensee's ANS for Vermont Yankee; therefore, the NRC concluded that the Licensee did not satisfy the planning standard in section 50.47(b)(5).

In a letter to Entergy dated February 2, 2005, the NRC concluded that the inspection finding associated with the tone-alert radios was of low-to-moderate safety significance (a White finding) because ''an emergency preparedness risk significant planning standard, namely, the ability to provide early notification and clear instruction to the populace within the plume exposure pathway EPZ, was degraded.'' The significance of the finding was mitigated by the fact that the majority of the population remained protected by the sirens and a large percentage of the tone-alert radios remained functional throughout the EPZ. The letter also indicated that the NRC recognized that some of the individuals who were not issued tone-alert radios may be notified via other various informal or unplanned methods. However, the Licensee does not take credit for these other methods

of notification for the Vermont Yankee ANS; therefore, the NRC cannot assume that these methods would be successful. The White finding was determined to be a violation of section 50.47(b)(5) and, accordingly, a Notice of Violation was enclosed with the letter.

Entergy responded to the NRC's February 2, 2005, Notice of Violation in a letter dated March 3, 2005. The letter discussed corrective actions that have been taken and corrective actions that were planned to address the tone-alert radio issues. Some of the specific corrective actions identified were as follows:

- As an immediate compensatory measure, towns in the EPZ were prepared to use route alerting for notification in place of the tone-alert radios in the event of an emergency.
- In September 2004, Entergy completed a card mailing to all residences in the 10-mile EPZ to solicit requests for new tone-alert radios.
- In December 2004, Entergy completed the annual calendar mailing of emergency information to residences in the EPZ. As a result of this mailing and the previously mentioned card mailing, Entergy received requests for approximately 1300 tone-alert radios. Entergy distributed the tone-alert radios, along with the instructions for use, to everyone who requested one. The instructions contain a toll-free number for reporting problems.
- Entergy met with town emergency management directors to understand the historical and current processes used to maintain and track households in possession of tone-alert radios.
- Entergy updated the tone-alert radio computer database based on inputs from the postcard and calendar mailings and inputs from the town emergency management directors.
- An offsite emergency preparedness support procedure has been developed to describe the responsibilities of Entergy, state, and town personnel with respect to tone-alert radios. The procedure addresses distribution, maintenance, and testing of the tone-alert radios and provides guidance for reviewing and updating the computer database.
- Entergy will perform an annual mailing of a replacement battery to residents who have accepted a tone-alert radio. This mailing will also be used to update residents on the use and testing of the radios. These actions are scheduled to be completed by October 31, 2005.

In addition to the specific corrective actions needed to restore compliance with the regulations, Entergy indicated that it planned to make enhancements to the emergency notification systems, including:

- The EPZ siren system will be upgraded and enhanced. The upgrade will replace all existing sirens and the associated control components. Installation and final testing was completed earlier this year.
- Entergy intends to implement an automated telephone notification system. No specific schedule date was provided for this effort.

The NRC conducted a supplemental inspection to determine if the Licensee understood the root and contributing causes of the White finding, to assess the Licensee's extent of condition review, and to determine if the corrective actions prevent recurrence. The inspection was conducted during the week of May 23, 2005, and the inspection report was issued on July 11, 2005. The inspection report concluded that the Licensee's Staff understood the root and contributing causes, that the Licensee had adequately addressed the extent of condition, and that the corrective actions were adequate to prevent recurrence.

As discussed previously, FEMA's letter to the NRC dated February 10, 1999, stated that FEMA had completed an analysis of the Vermont Yankee ANS and determined that there is reasonable assurance that the system is adequate to alert and promptly notify the public in the event of a radiological emergency at Vermont Yankee. A 1996 FEMA report enclosed with the FEMA letter concluded that the tone-alert radio system developed for Vermont Yankee meets FEMA guidelines for tone-alert radio systems. FEMA headquarters and FEMA Region I staff are aware of the NRC-identified violation of section 50.47(b)(5) for the failure of the tone-alert radio program to meet the intent of the design basis for the Vermont Yankee ANS. Based on recent discussions with the NRC Staff, and taking into consideration Entergy's corrective actions as well as the Petitioner's concerns, FEMA has reiterated the position stated in its letter dated February 10, 1999.

Based on FEMA's input, and on our own inspection of the Licensee's proposed and completed corrective actions, the NRC Staff concludes that there is reasonable assurance that the tone-alert radio program at Vermont Yankee will provide the necessary notifications.

D. Licensee Performance

1. Petitioner's Concerns

The petition raised several concerns about Licensee performance. Specifically, the petition stated that repeated failures of both physical components and human performance in the area of emergency response and emergency notification are cumulatively sufficient for a determination that Vermont Yankee is operating without a functional emergency response plan and that there are serious systematic flaws in Licensee management and operations. The petition also stated that the Licensee has established in recent years an extremely poor record in the area

of emergency response with wholly inadequate quality assurance, root-cause analysis, and corrective action after procedural, human error, and system failures. The Petitioner provided the following examples to support the concerns:

- The most recent emergency exercise was shot through with organizational and communication failures that duplicated those of the previous exercise.
- During the April 2004 transformer fire, operators displayed a shocking unfamiliarity with use of dedicated emergency notification telephone, ultimately abandoning them to use ordinary phones.
- In another recent instance, an emergency transmitter generator was inadvertently activated when a utility lineman disconnected power supply lines. The generator then ran until partially filled fuel tanks were exhausted; all without being detected by the Licensee.

The petition also stated that the Vermont Yankee public warning system is not operable and cannot at this time pass minimum standards of operability under 10 C.F.R. Part 50, Appendix E, and other applicable regulations. During the teleconference on January 6, 2005, the Petitioner emphasized that the operability question is related to what he believes is a series of failures in emergency notification and emergency response preparedness and that the NRC should determine whether these repeated failures indicate a systemic or management failure.

2. NRC Staff Evaluation

The emergency exercise cited by the Petitioner was the biennial full-participation exercise at Vermont Yankee in April 2003. The NRC Staff documented its evaluation of the exercise in an inspection report dated May 20, 2003. The NRC identified one issue of very low safety significance (Green) that was determined to be a noncited violation of NRC requirements. Specifically, the Licensee failed to take adequate corrective actions for eight problems that were found to be repetitive from previous emergency preparedness exercises and drills conducted since 2001 and were again identified during the 2003 biennial exercise. The inspection report indicated that although problems were encountered, the Licensee found alternative methods during the exercise for completing the actions needed to meet the exercise objectives and protect the public health and safety. During the most recent emergency preparedness inspection at Vermont Yankee, the inspector assessed the Licensee's ability to assess repetitive issues and take effective corrective actions. This is documented in NRC Inspection Report 05000271/2004009, dated November 12, 2004. No findings of significance were identified.

Details regarding the transformer fire are documented in a licensee event report (LER) dated August 16, 2004, and in NRC inspection reports dated July 26 and November 8, 2004. As discussed in the LER, the Licensee declared an ''Unusual Event'' at 6:50 a.m. because of a fire lasting longer than 10 minutes. The fire was extinguished by 7:17 a.m. through the combined efforts of the automatic fire suppression system, the site's fire brigade, and the local volunteer fire department. During the event, one of the NRC resident inspectors observed that the Licensee's control room personnel encountered difficulty in using a new phone system for contacting the emergency management organizations in Vermont, New Hampshire, and Massachusetts. As a result, the Licensee used an alternate phone and did not complete the notifications until 7:21 a.m. Section IV.D.3 of Appendix E to 10 C.F.R. Part 50 states that licensees shall have the capability to notify responsible state and local governments within 15 minutes after declaring an emergency. Although the phone system has the capability to provide the notifications within 15 minutes, actual notifications took longer than 15 minutes because of the problems in using the phone system. Consistent with the guidance in NRC Inspection Manual Chapter 0612, the NRC Staff determined that Entergy's delay in notifying the states of the Unusual Event was of minor significance. There was no actual safety consequence to the delay since the states were all notified of the event and did not need to take any action. The delay had little or no potential to impact safety since the delayed notification was due to operator error in using the upgraded system and methods were available to make the required notifications. Entergy provided training to address the human performance problem.

The third example cited by the Petitioner relates to a Vermont Yankee 10 C.F.R. § 50.72 event notification report dated July 21, 2004. The Licensee was notified by its radio and siren vendor that the Ames Hill transmitter (which activates tone-alert radios) was inoperable between 7:30 p.m. on July 20, 2004, and 10:55 a.m. on July 21, 2004, due to a loss of normal power and a failure of its backup generator. The NRC Region I staff has reviewed the events and circumstances surrounding the Ames Hill transmitter failure and did not identify any findings of significance. If an emergency at Vermont Yankee requires use of the tone-alert radios, the Vermont Emergency Management (VEM) organization notifies the National Weather Service (NWS) in Albany, New York. If the NWS determines that the tone-alert radios cannot be activated, as would be the case if the Ames Hill transmitter was inoperable, the NWS would inform VEM and the emergency management organizations in New Hampshire and Massachusetts. The states, in turn, inform the affected towns to do backup route alerting.

The NRC Staff reviews Vermont Yankee performance under the Reactor Oversight Process for the Emergency Preparedness cornerstone. During the fourth quarter in 2004, there was one White finding and one Green finding, which were both documented in an inspection report dated November 12, 2004. The White

finding involved the tone-alert radio issue discussed previously. The Green finding involved the Licensee's failure to assign continuous onshift responsibilities for reading the facility seismic monitoring system, thereby affecting the ability to promptly classify a seismic event. There were no other findings in the Emergency Preparedness cornerstone in 2004, or in the first quarter of 2005. In addition, all performance indicators in the Emergency Preparedness cornerstone are currently at a level requiring no additional NRC oversight (Green). As described in the NRC's annual assessment letter to Entergy dated March 2, 2005, overall Vermont Yankee operated in a manner that preserved the public health and safety and fully met all cornerstone objectives. Plant performance for the fourth quarter of 2004 was in the Regulatory Response column of the NRC's Action Matrix, based on the one White finding. As mentioned before, the NRC conducted a supplemental inspection and determined that the Licensee's root-cause evaluation, extent of condition review, and corrective actions were acceptable.

Based on the above evaluation, the NRC Staff has determined that no other action beyond the normal baseline inspection activities is needed at this time to address the Licensee's performance related to the Emergency Preparedness cornerstone.

III. CONCLUSION

The NRC Staff has reviewed the basis for the Petitioner's requested actions. Based on the evaluations in section II, the Staff concludes that: (1) route alerting completed within 45 minutes of detection of a failure of the primary ANS meets the requirements for prompt public notification in 10 C.F.R. § 50.47(b)(5) and 10 C.F.R. Part 50, Appendix E, § IV.D.3; (2) there is reasonable assurance that backup route alerting for an event at Vermont Yankee will provide the necessary notifications; (3) there is reasonable assurance that fixed sirens combined with the tone-alert radio program at Vermont Yankee will provide the necessary notifications; and (4) no other action is needed at this time to address the Licensee's performance related to the Emergency Preparedness cornerstone. Based on these conclusions, the NRC denies the Petitioner's requests described in section I.

As provided in 10 C.F.R. § 2.206(c), a copy of this Director's Decision will be filed with the Secretary of the Commission for the Commission to review. As provided for by this regulation, the Decision will constitute the final action of the

Commission 25 days after the date of the Decision unless the Commission, on its own motion, institutes a review of the Decision within that time.

FOR THE NUCLEAR REGULATORY COMMISSION

J.E. Dyer, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 7th day of November 2005.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

J.E. Dyer, Director

In the Matter of

BOILING-WATER REACTORS OF MARK I AND II DESIGN **November 7, 2005**

SPENT FUEL SECURITY AT ALL MARK I AND II BWR PLANTS

By letter dated August 10, 2004, and supplements, the Nuclear Security Coalition (the Petitioner, a consortium of about forty-five public interest groups) filed a 10 C.F.R. § 2.206 petition. The Petitioner requested that the NRC take the following actions: (1) issue a Demand for Information to the licensees of all Mark I and II BWRs and conduct a 6-month study of options for addressing structural vulnerabilities; (2) present the findings of the study at a national conference attended by all interested stakeholders, providing for transcribed comments and questions; (3) within 12 months develop a comprehensive plan that accounts for stakeholder concerns and addresses structural vulnerabilities of all Mark I and II BWRs; (4) issue orders to the licensees for all Mark I and II BWRs compelling incorporation of a comprehensive set of protective measures, including structural protection measures; and (5) make future operation of each Mark I and II BWR contingent on licensees addressing their structural vulnerabilities with the participation and oversight of a panel of local stakeholders.

The final Director's Decision (DD) on this petition was issued on November 7, 2005. The final DD addresses the Petitioner's requested actions as follows: (1) granted, in effect, the proposed demand for all licensees of Mark I and II BWRs to conduct a 6-month study of options for addressing structural vulnerabilities; (2) denied the proposed national conference to present the findings of the study; (3) considered that NRC has granted the proposed development of a comprehensive plan to account for stakeholder concerns and address structural vulnerabilities of all Mark I and II BWRs; (4) denied the proposed issuance of orders to the licensees for all Mark I and II BWRs compelling incorporation of a comprehensive

set of protective measures; and (5) denied the proposed requirement that future operations of all Mark I and II BWRs be contingent on licensees addressing the structural vulnerability of their reactors, with participation and oversight by a panel of local stakeholders.

In preparing the final DD, the NRC Staff took into account all the actions implemented and being implemented by the NRC and licensees since the 9/11 disaster. The bulk of the information on these actions is either safeguards information or is classified as national security. Some information was made publicly available by a letter, Chairman Diaz to Senator Domenici, dated March 14, 2005; the final DD references this letter for technical contents. In the NRC Staff's judgment, the actions implemented by the NRC and licensees has far exceeded what the Petitioner requested in the petition. However, because of the nonpublic nature of the information, the final DD only makes general statements to this effect.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

I. INTRODUCTION

By letter dated August 10, 2004, addressed to Mr. Luis A. Reyes, Executive Director for Operations at the U.S. Nuclear Regulatory Commission (NRC), as supplemented in a meeting on September 23, 2004 (documented in a meeting summary dated October 13, 2004, Agencywide Document Access and Management System (ADAMS) Accession No. ML042870571), the Nuclear Security Coalition (the Coalition or the Petitioner) filed a petition pursuant to Title 10 of the *Code of Federal Regulations,* section 2.206 (10 C.F.R. § 2.206). Additional information was submitted by Paul Gunter of the Nuclear Information and Resource Service, who is a member of the Coalition, on November 29, 2004 (Accession No. ML043420386); December 6, 2004 (Accession No. ML043420423); March 15, 2005 (Accession No. ML050750005); March 28, 2005 (Accession No. ML050880013); April 12, 2005 (Accession No. ML051170034); and April 19, 2005 (Accession No. ML051160159). The Coalition, comprised of forty-five independent organizations, requested that the NRC take the following actions: (1) issue a Demand for Information to the licensees of all Mark I and II boiling-water reactors (BWRs) and conduct a 6-month study of options for addressing structural vulnerabilities; (2) present the findings of the study at a national conference attended by all interested stakeholders, providing for transcribed comments and questions; (3) within 12 months develop a comprehensive plan that accounts for stakeholder concerns and addresses structural vulnerabilities of all Mark I and II BWRs; (4) issue orders to the licensees for all Mark I and II BWRs compelling

incorporation of a comprehensive set of protective measures, including structural protection measures; and (5) make future operation of each Mark I and II BWR contingent on licensees addressing their structural vulnerabilities with the participation and oversight of a panel of local stakeholders.

In addition to the five actions summarized above, the Coalition stated that the petition supports the concerns raised by the National Academy of Sciences (NAS) in a ''report on fuel pool vulnerabilities to be released this month.'' The Petitioner's letter of April 19, 2005, explained its agreement with the April 2005 public summary of the NAS report.

The Petitioner's representatives participated in a meeting and teleconference with the Petition Review Board (PRB) on September 23, 2004, to discuss the petition. This interaction gave the Petitioner's representatives an opportunity to provide additional information and to clarify issues raised in the petition. The results of this discussion were considered in the PRB's determination regarding the request for action and in establishing the schedule for reviewing the petition.

In a letter dated October 19, 2004 (Accession No. ML042880346), the PRB notified the Petitioner that the PRB would treat this request pursuant to 10 C.F.R. § 2.206 of the Commission's regulations.

The aforementioned correspondence and a transcript of the September 23, 2004, teleconference are available in ADAMS for inspection at the Commission's Public Document Room (PDR) at One White Flint North, Public File Area 01 F21, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records are also accessible from the ADAMS Public Electronic Reading Room on the NRC Web site, *http://www.nrc.gov/reading-rm/adams.html.* Persons who do not have access to ADAMS or have problems in accessing the documents located in ADAMS, should contact the NRC PDR reference staff by telephone at 1-800-397-4209 or 301-415-4737 or by e-mail to *pdr@nrc.gov.*

II. DISCUSSION

As discussed in section I, the Petitioner requested that the NRC take certain actions regarding Mark I and II BWRs. The specific requested actions are restated along with the Coalition's supporting assertions and discussed in the following sections.

As stated earlier, the Petitioner expressed support for the concerns raised by the NAS in its report on fuel pool vulnerabilities. In April 2005, the NAS published a public summary of its classified report. Prior to the release of this public summary, the NRC had responded to the NAS report (classified nonpublic version) in a letter from Chairman Nils J. Diaz to Senator Pete V. Domenici dated March 14, 2005 (Accession No. ML050280428). In that letter, the NRC stated that: (1) the NAS report reinforces the validity of recent NRC studies which indicate that

spent fuel storage systems are safe and secure, and of NRC actions to improve the safety and security of such systems; (2) there are a number of areas of NRC disagreement with the NAS report; (3) some scenarios postulated by the NAS are unreasonable; and (4) some NAS recommendations lack a sound technical basis. Although the Petitioner endorsed the NAS report, and in its April 19, 2005 letter discussed the Petitioner's agreement with the public summary of the NAS report, the Staff noted that the Petitioner did not provide any new information that could alter the position already expressed in Chairman Diaz's letter of March 14, 2005, to Senator Domenici. Accordingly, the technical matters discussed in Chairman Diaz's March 14, 2005, letter need no further elaboration in this Director's Decision. The NRC Staff's response to the Coalition's five specific requested actions are as follows.

A. Requested Action 1 — Demand BWR I and II Licensees to Conduct a 6-Month Study of Options for Addressing Structural Vulnerabilities

1. Petitioner's Concern

The Petitioner requested that the NRC order the BWR Mark I and II licensees to conduct a full review of each facility's structural vulnerabilities. The Coalition's request was based on assertions that nuclear power plants are key national assets (i.e., prime targets for attacks) and that BWRs with Mark I and II containments are particularly vulnerable to air attack. Accordingly, defense of these assets is a national security imperative.

2. NRC Staff's Response

Nuclear plants incorporate structural features to protect against severe external events such as tornadoes, hurricanes, fires, and floods. These structural features, supported by the deployment of effective and visible physical protection measures, provide a deterrent to terrorist activities. With respect to potential terrorist attacks by air, federal efforts have increased substantially since September 11, 2001. Those efforts include enhanced airline passenger and baggage screening, strengthened cockpit doors, and the Federal Air Marshals program, among others. Federal law enforcement and intelligence agencies have increased efforts to identify and mitigate potential aircraft-related threats before they can be carried out. In more than one case, the Department of Defense and Federal Aviation Administration (FAA) have acted to protect airspace above nuclear power plants in response to threats that were later determined to be noncredible. These and other governmentwide efforts have improved protection against air attacks on all industrial facilities, both nuclear and nonnuclear. Nonetheless, nuclear

plant licensees have well-established emergency procedures and severe accident management guidelines that provide a means to help mitigate the potential consequences of terrorist attacks should they occur.

With respect to spent fuel storage, the NRC issued new security requirements for both spent fuel pools and dry casks after September 11, 2001. The NRC continues to inspect each facility's performance to verify effective implementation of the associated security programs and mitigating strategies.

In addition, the NRC is continuing to study various pressurized-water reactor (PWR) and BWR plant systems, including spent fuel storage, to determine whether additional mitigating strategies are warranted. Specifically, the NRC completed detailed structural assessments at two spent fuel pools (SFPs), the results of which indicate that significant releases of radioactivity due to a terrorist attack on a SFP are very unlikely. The NRC is performing plant-specific inspections and assessments at all BWR Mark I and II spent fuel pools. The NRC Staff is evaluating the adequacy of licensee measures to restore and maintain effective spent fuel cooling, if the pool were to be damaged. The NRC is also participating in a longer-term international cooperative testing program to examine spent fuel heatup behavior in an air environment (i.e., loss of spent fuel pool cooling water inventory). The NRC's ongoing research has provided numerous additional insights that have been provided to licensees so they can develop additional mitigating actions and strategies as warranted.

In summary, the NRC, other agencies of the federal government, the local governments, and the licensees have taken and continue to take extensive actions to enhance protection of these facilities in a manner consistent with NRC's defense-in-depth philosophy. These actions have significantly improved the safety and security of spent fuel storage. Therefore, the intent of the 6-month study requested by the Petitioner has been achieved. Accordingly, the Petitioner's request has, in effect, been granted.

B. Requested Action 2 — Present the Findings of the Study at a National Conference for All Interested Stakeholders, Providing for Transcribed Comments and Questions

1. Petitioner's Concern

The Petitioner asked that the NRC present the findings of the requested vulnerability study at a national conference for all interested stakeholders. The Petitioner's request was based on an assertion that the public should be involved in addressing the structural vulnerabilities of nuclear power plants and involved in developing stronger defenses for Mark I and II BWRs.

2. NRC Staff's Response

The NRC is committed to ensuring openness and obtaining public input in its decisionmaking. The NRC attempts to keep the public appropriately informed within the constraints of the law. As part of its mission to protect the public health and safety, common defense and security, and the environment, the NRC must ensure that sensitive information about the Nation's nuclear facilities does not fall into the hands of terrorists. Public release of information concerning physical security of nuclear facilities, known as Safeguards Information (SGI), which could potentially be exploited by an adversary would be contrary to the NRC's efforts to ensure protection of the Nation's nuclear infrastructure and to NRC's statutory duties. *See* section 147 of the Atomic Energy Act of 1954, as amended, 42 U.S.C. § 2166, and 10 C.F.R. § 73.21(c). In addition, the NRC's assessments of BWR structural vulnerabilities, including both the methodology employed and the results, are classified as national security information pursuant to Executive Order 12958, as amended on November 1999 and March 2003. Public release of national security information is prohibited pursuant to 10 C.F.R. § 95.35. Since the information that the Petitioner wishes to discuss at a national conference of stakeholders is either safeguards or national security information, the Petitioner's request for a presentation of a vulnerability study at a national conference of all interested stakeholders must be denied. The NRC notes, however, that some of this information has been declassified and is available in the public domain (e.g., Chairman Diaz's March 14, 2005 letter and the publicly available summary of the NAS report).

C. Requested Action 3 — Within 12 Months Develop a Comprehensive Plan That Accounts for Stakeholder Concerns and Addresses Structural Vulnerabilities of All Mark I and II BWRs

1. Petitioner's Concerns

The Petitioner requested that the NRC develop a comprehensive plan that accounts for stakeholder concerns and addresses structural vulnerabilities of all Mark I and II BWRs within 12 months. The Petitioner's request was based on assertions that BWRs with Mark I and II containments are particularly vulnerable to attacks and that the NRC requires only light defenses for commercial nuclear plants.

2. NRC Staff's Response

As indicated in the response to Requested Action 1, the NRC has already developed and implemented a comprehensive plan consistent with stakeholder

concerns. Further, the NRC disagrees with the Petitioner's contention that NRC requires only light defense of commercial nuclear plants. To the contrary, the NRC, other agencies of the federal government, local governments, and the licensees have implemented broad and comprehensive measures that more than meet the intent of the Petitioner's request for a comprehensive plan on security enhancement (see discussion under Requested Action 1).

Subsequent to September 11, 2001, NRC assessments (discussed under Requested Action 1) prompted the NRC to adjust its requirements for mitigation of a variety of potential terrorist attacks against nuclear facilities. As a result, on February 25, 2002, the NRC issued orders to all operating nuclear reactor facilities, requiring that interim compensatory security measures be implemented beyond those called for by current regulations. Several additional security-related orders have been issued since then, most notably a supplemental design-basis threat, that required additional security enhancements to be implemented at each nuclear plant site. *See* 68 Fed. Reg. 24,517 (May 7, 2003).

The NRC also issued a letter on July 29, 2004, with a sensitive unclassified Safeguards Information enclosure specifying certain mitigative measures for licensees to take to enhance their ability to restore and maintain effective fuel cooling if the pool or the overlying structure were severely damaged. The NRC Staff met with power reactor licensees in February 2005 on the NRC's spent fuel pool mitigation measures. At the end of February 2005, power reactor licensees were given until May 2005 to respond to the additional specific recommendations. The NRC Staff is currently evaluating these responses to ensure they meet NRC's expectations. The NRC carried out its inspections in September and October of this year. A final report is due to the Commission in December.

Lastly, and as indicated previously, the NRC continues to conduct independent assessments of plant and system vulnerabilities (including SFPs) to terrorist attacks and to work with the nuclear industry and individual licensees to implement, as appropriate, additional plant-specific mitigation strategies. Accordingly, this request is considered to have been granted.

D. Requested Action 4 — Issue Orders to Mark I and II BWRs Compelling Incorporation of a Comprehensive Set of Protective Measures, Including Structural Protection

1. Petitioner's Concerns

The Petitioner requested the NRC to issue orders to the licensees for all Mark I and II BWRs compelling incorporation of a comprehensive set of protective measures, including structural protection. The Petitioner's request was based on the assertion that, though stronger defense options are available for Mark I and II BWRs, the NRC requires only light defenses for commercial nuclear facilities.

2. NRC Staff's Response

Nuclear power plants are among the best protected private-sector facilities in the nation. Commercial nuclear power plants are protected by physical barriers, armed guards, intrusion detection systems, area surveillance systems, access controls, and access authorization requirements for personnel working inside the plants. Physical protection was further enhanced through a series of NRC orders issued after September 11, 2001. As a result, nuclear plant licensees have further strengthened their already well-protected facilities by providing additional security measures that add to the layered protective strategies established to defend against potential terrorist attacks. The NRC has also enhanced coordination among applicable federal, state, and local agencies responsible for protecting the national critical infrastructure.

As indicated in the response to the Petitioner's Requested Action 1, NRC studies to date indicate that significant releases of radioactive material due to a terrorist attack on a spent fuel pool are very unlikely. Therefore, additional protective measures relating to structural protection of Mark I and II BWRs are not considered necessary at this time.

In summary, the NRC Staff has already achieved what the Petitioner has requested, although no additional order was issued specifically to Mark I and II BWR licensees. Therefore, this request for orders to compel incorporation of a comprehensive set of protective measures has been denied.

E. Requested Action 5 — Make Future Operation of Each Mark I and II BWR Contingent on Addressing Its Structural Vulnerabilities with Participation and Oversight of a Panel of Local Stakeholders

1. Petitioner's Concerns

The Petitioner requested that the NRC make future operation of each Mark I and II BWR contingent on licensees' addressing their plants' structural vulnerabilities with the participation and oversight of a panel of local stakeholders. The Petitioner's request was based on the premise that the public should be involved in examining vulnerabilities and developing security plans for BWRs with Mark I and II containment designs.

2. Staff's Response

The operation of power reactor plants is contingent on licensees' conducting their operations in accordance with NRC regulatory requirements and other conditions of their operating licenses. As stated previously, since September 11, 2001, the NRC has imposed by order numerous enhancements at all nuclear plants to protect against a range of threats. Effective licensee implementation

of these requirements has been and continues to be the subject of independent NRC inspections. As such, and for all of the reasons stated in response to the other requested actions, the NRC finds no justification for imposing any new requirements specifically on BWR Mark I and II designs. Using the established regulatory framework, and when deemed appropriate and necessary based on risk insights from NRC's continued assessments of plant and system vulnerabilities, the NRC will take appropriate actions to ensure adequate protection of public health and safety, the environment, and the common defense and security. Accordingly, this part of the Petitioner's request is denied.

It is the NRC's policy to encourage public involvement in its regulatory activities. Public concerns and interests have always been, and will continue to be, a high priority for the NRC. There are many ways for the public to be involved in almost all of the NRC's processes. With respect to security and safeguards, the NRC maintains close and continuous interaction with the Department of Homeland Security, the Federal Bureau of Investigation, the Central Intelligence Agency, and other government agencies to ensure that threat assessments and suspicious activities are vetted by the intelligence and law enforcement communities. Although there must be a close hold on sensitive information involving the details of security efforts, it should be clear that the NRC and licensees have been very actively pursuing security enhancements at nuclear power plants. In addition to its inspection and evaluation of licensee security programs and mitigation strategies, the NRC continues to perform its congressionally mandated responsibilities for security by confirming the effectiveness of security plans through the force-on-force testing and inspections pursuant to the Reactor Oversight Program. The public is free to comment on this and any aspect of the NRC's oversight process. Therefore, the request for the participation and oversight of a panel of stakeholders has also been denied.

As provided in 10 C.F.R. § 2.206(c), a copy of this Director's Decision will be filed with the Secretary of the Commission for the Commission to review. As provided for by this regulation, the decision will constitute the final action of the Commission 25 days after the date of the decision unless the Commission, on its own motion, institutes a review of the decision within that time.

FOR THE NUCLEAR REGULATORY COMMISSION

J.E. Dyer, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 7th day of November 2005.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

J.E. Dyer, Director

In the Matter of **Docket No. STN 50-454**
(License No. NPF-37)

EXELON GENERATION COMPANY, LLC
(Byron Station, Unit 1) **November 8, 2005**

The Petitioner requested that the Nuclear Regulatory Commission (NRC) take enforcement action against Exelon Generation Company, LLC's Byron Station for failure to comply with 10 C.F.R. Part 50, Appendix B, Criterion XVI. Specifically, the Petitioner stated that the 1C cold leg loop stop isolation valve (LSIV) (1RC8002C) has been broken for at least 6 years and has not been repaired. The Petitioner stated that the failure mechanism was metal-to-metal contact between the valve disc and a misaligned valve guide which introduced debris into the reactor coolant system.

The final Director's Decision on this petition was issued on November 8, 2005. That decision addresses several issues related to the LSIV operation including: (1) whether the Licensee has adequately justified the structural integrity of the guide valves in 1RC8002C; and (2) the effect of loose parts, should they occur, on operation and shutdown of the reactor.

With respect to the first issue, the NRC Staff concluded that the Licensee has adequately justified the structural integrity of the valve guides in 1RC8002C. The Staff concluded that there is reasonable assurance that the valve blocks (installed to restrict movement of the valve guides) remain in the valves, thus preventing intact valve guides from sliding out of their grooves and into the reactor coolant system flow stream. In the most recent refueling outage (B1R13), there were no loose parts that were associated with the LSIVs identified during the 10-year inservice inspection of the reactor vessel. There is no evidence of physical degradation of 1RC8002C.

With respect to the second issue, the NRC Staff concluded that large loose parts would become a factor in the event of a large-break loss-of-coolant accident (LBLOCA), and then only a small factor in comparison to the consequences of the LBLOCA. Based on the evaluation for the potential of 1RC8002C valve degradation, the Staff also concluded that large loose parts from the Byron Station Unit 1 cold leg LSIVs have an acceptably low potential of occurrence. In the event that there are small loose parts in the reactor coolant system which could compromise systems used for normal shutdowns, Byron Unit 1 can be taken from normal operating conditions to cold shutdown using only safety-grade systems with no increase in radiation exposure to the public. With regard to the effect of small loose parts from the 1RC8002C valve that might be carried into the reactor core, the Staff concluded that the expected number of such parts would not affect safe operation of the plant.

Consequently, the NRC denied the request to take enforcement action against the Licensee.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

I. INTRODUCTION

By electronic mail dated March 2, 2005, to Mr. Luis A. Reyes, Executive Director for Operations at the U.S. Nuclear Regulatory Commission, Mr. Barry Quigley (the Petitioner) filed a petition pursuant to Title 10 of the *Code of Federal Regulations,* section 2.206 (Agencywide Document Access and Management System (ADAMS Accession No. ML050680255). The Petitioner requested that the U.S. Nuclear Regulatory Commission (NRC) take enforcement action against Exelon Nuclear's (Exelon's or the Licensee's) Byron Station for failure to comply with 10 C.F.R. Part 50, Appendix B, Criterion XVI. Specifically, the Petitioner stated that the 1C cold leg loop stop isolation valve (LSIV) (1RC8002C) has been broken for at least 6 years and has not been repaired. The basis for the request is that LSIV 1RC8002C can be difficult to close, to the point that the protective features of the motor actuated. The Petitioner stated that the failure mechanism was metal-to-metal contact between the valve disc and a misaligned valve guide which introduced debris into the reactor coolant system.

On March 3, 2005, the Office of Nuclear Reactor Regulation (NRR) Petition Review Board (PRB) first met to discuss the petition. On March 4, 2005, the Petitioner provided additional clarifying information during a conference call with the PRB. The conference call was recorded; a transcript is publicly available in ADAMS Accession No. ML050870619. Subsequent information was provided by the Licensee in ADAMS Accession Nos. ML051670196,

ML051670192, ML051660544, ML051660534, ML051660541, ML051660527, and ML051660529. In addition, a public meeting was held in the NRC Region III offices on March 21, 2005; a summary of the meeting is available in ADAMS Accession No. ML050820530. Following an internal PRB meeting on March 22, 2005, NRC sent the Petitioner an acknowledgment letter, dated April 5, 2005 (ADAMS Accession No. ML050870616). Although the NRC concluded that there was no immediate safety concern, and, therefore, it did not have a basis for taking immediate action, it decided that the issue should be reviewed for potential enforcement action under the 10 C.F.R. § 2.206 petition process. In support of the ongoing review, the Licensee responded on May 27, 2005 (ADAMS Accession No. ML051590148) to the NRC's Request for Additional Information dated May 4, 2005 (ADAMS Accession No. ML050970118).

All referenced documents are available in ADAMS for inspection at the NRC's Public Document Room (PDR) at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible from the ADAMS Public Electronic Reading Room on the NRC Web site at *http://www.nrc.gov*. Persons who do not have access to ADAMS or who have problems in accessing the documents in ADAMS should contact the NRC PDR reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to *pdr@nrc.gov*.

The NRC sent a copy of the proposed Director's Decision to the Petitioner and to the Licensee on July 29 and August 1, 2005, respectively (ML051940352 and ML051940179). The Petitioner responded on August 14, 2005 (ML052500244). The Licensee responded on August 12, 2005 (ML052500241). The Licensee's comments clarified the description of certain plant components. A more detailed response to the Petitioner's comments is available in ADAMS (ML052860285) and is included as a separate enclosure to the letter of issuance for this Director's Decision. After considering the comments received, the Staff revised selected portions of the Director's Decision.

II. DISCUSSION

The LSIVs facilitate repair and maintenance activities on the steam generators during plant outages. Although the bodies of the LSIVs are part of the primary system pressure boundary, valve operation does not perform a safety function. However, the malfunction of the valves could create a potential safety concern. Valve degradation could result in the introduction of loose parts into the reactor coolant system (RCS). For example, a valve guide could slip out of the groove in the valve body due to a pin or valve retaining block failure, a valve guide could break (which has happened within the industry), or the blocks might have been improperly installed at the bottom of the valve guides. In addition, it was not clear

that the Licensee fully considered how a loose part might affect the analyses of Updated Final Safety Analysis Report (UFSAR) design-basis accidents.

One aspect of the NRC Staff review focused on whether 1RC8002C was degraded to a point where a loose part (e.g., a piece of valve guide) could migrate to the reactor vessel. The Licensee's and the Staff's analyses of the motor-operated valve's torque switch settings for 1RC8002C indicated that the thrust forces were unlikely to cause the valve guides to yield or break. During the most recent Byron Station Unit 1 refueling outage, the Licensee was able to fully close 1RC8002C, indicating that the valve guide had not slipped onto the valve seat. The Staff determined that the valve guide cannot exit the valve in one piece because of the length of the valve guide and its geometric relation to the valve disc when the valve is open. Plants where valve guides broke and migrated into the RCS or slipped onto the valve seat did not have the same retaining blocks as Byron Station Unit 1. Therefore, a key issue was whether the valve blocks were still in position in 1RC8002C. The Licensee's installation package included quality control points during the welding process for the valve blocks. Also, the Licensee said during the public meeting on March 21, 2005, that the valve blocks had been visually inspected by remote means during installation. The welding process should make the valve blocks able to withstand significant force in their installed position. Although not absolutely certain that the valve blocks remained installed in the valve, the Licensee did not locate any valve blocks during the 10-year inservice inspection of the reactor vessel at Byron Station Unit 1. Therefore, the NRC Staff considered that reasonable assurance existed to support the Licensee's conclusion that the valve blocks remained in place in LSIV 1RC8002C. In that absolute assurance did not exist for the presence of the valve blocks, the Licensee evaluated the capability of the valve guides to maintain their structural integrity if the valve blocks did not prevent the guides from slipping into the path of the valve disc when the valve was closing. The Licensee determined that the torque switch setting of the motor actuator for LSIV 1RC8002C was not set sufficiently high to break the valve guides. When intact, the valve guides are too long to enter the RCS flow stream. Therefore, the Staff considered that the Licensee had provided reasonable assurance that the valve blocks remained in place. As a result, NRC Staff finds that the Byron Station Unit 1 RCS cold leg LSIV 1RC8002C is unlikely to be degraded to the point that the valve guide, or a piece of the valve guide, can loosen and migrate to the reactor vessel during normal plant operation.

Nevertheless, the Staff considered the potential for the release of loose parts into the RCS at Byron Station Unit 1 and what effect they may have on plant operation. A large loose part would be expected to be carried by the RCS flow into the bottom of the reactor vessel or be lodged somewhere else in the primary system. Under normal operating and shutdown activities, the part would remain there. The Staff has concluded that the only event that could produce sufficiently high RCS flow and turbulence to move the part with sufficient velocity to

do damage within the RCS boundary is a large-break loss-of-coolant accident (LBLOCA). However, in the case of an LBLOCA, any damage done by the loose part would be small compared to the damage resulting from the LBLOCA itself. During the most recent refueling outage (B1R13), there were no loose parts that were associated with the LSIVs identified during the 10-year inservice inspection of the reactor vessel. Further, the Staff considers it unlikely that a large loose part present in the RCS, coincident with a loss-of-coolant accident of sufficient size to cause the loose part to become an aggravating factor would occur.

With regard to small loose parts, the NRC Staff postulated the following situations: (1) a loose part obstructing the chemical and volume control system (CVCS) letdown line from the RCS, (2) a loose part obstructing the pressurizer sprayline/nozzle, and (3) loose parts entering the reactor core. In its May 27, 2005, submittal, the Licensee addressed the first two situations by referring to section 5.4 of the Byron Station UFSAR. Section 5.4 discusses compliance with Reactor Systems Branch (RSB) Branch Technical Position RSB 5-1, ''Design Requirements of the Residual Heat Removal System,'' attached to section 5.4.7 of the NRC Standard Review Plan (NUREG-0800). RSB 5-1, which specifies shutdown requirements for light water reactors, requires in part that the reactor can be taken from normal operating conditions to cold shutdown using only safety-grade systems. Section 5.4 of the Byron Station UFSAR shows that the Byron Station has the capability to transition from normal operating conditions to a cold shutdown under a natural circulation scenario without pressurizer spray and with limited functional capability (e.g., a loss of RCS letdown). NRC reported its acceptance of this analysis in Supplement 2 to NUREG-0786, ''Safety Evaluation Report Related to the Operation of Byron Station, Units 1 and 2.'' In the response to the draft Director's Decision, the Petitioner commented that because of concerns with the capability of the pressurizer relief tank (PRT), the proposed process for cooling down in the event of obstructions in the normally used systems is invalidated. The PRT is a nonsafety vessel that condenses and cools any steam that might be discharged from the pressurizer power-operated relief valves. If, while the plant is being shut down, the pressure in the PRT becomes too high (which is the Petitioner's concern), the pressure discs would rupture (as designed), thus directing the tank discharge to the containment drains and the containment sump. While not a preferred shutdown method, the reactor could be safely shut down with no increase in radiation exposure to the public.

Both the CVCS letdown line and the pressurizer sprayline/nozzle are downstream of the 1RC8002C valve at Byron. In the event that small loose parts continued past the lines, it could conceivably be carried by the RCS flow through the reactor downcomer and into the lower plenum. From the lower plenum, loose parts could turn with the flow and impact the bottom of the core. Before entering the core, the loose parts would have to pass through debris filters which would remove some of them. Each fuel assembly at Byron has a 17×17 array of fuel

rods, which translates to approximately 50,000 flow channels in the core. It would take a large number of small parts, passing through the debris filters, to plug a significant portion of the flow channels in the core. In the event that some small loose parts do enter the core and form plugs, RCS flow would be restricted and/or redirected in the area of the plugs. However, the flow streams would reunite downstream of the plugged flow channel volume.

It is also possible that small loose parts could cause fuel fretting resulting in some fuel leakage. Nevertheless, any leakage in excess of that considered during plant design and licensing would require a plant shutdown in accordance with the plant's technical specifications.

In its May 27, 2005 submittal, the Licensee (1) discussed the detection and alerting system that would enable plant personnel to identify the presence of loose parts and (2) the procedures for identifying and responding to a loose part. The Licensee's loose parts monitoring system (LPMS), which is designed to comply with Regulatory Guide 1.133, ''Loose Part Detection Program for the Primary System of Light-Water-Cooled Reactors,'' is to function to automatically detect metal-to-metal type impacts that may be indicative of a loose part in the RCS. Operator response to the LPMS alarms is governed by Byron Station procedures. Based on a review of the information provided, the NRC Staff concludes that, when utilized, the Licensee's loose parts monitoring system would provide a tool to detect, alarm, and help locate and identify large loose parts.

In the March 21, 2005 public meeting, Exelon discussed its long-term plans for addressing the 1RC8002C performance issues. First, Exelon noted that a rigging structure needed to perform the valve repair was constructed during the most recent Byron Station Unit 1 refueling outage. Second, Exelon stated that it would prepare a contingency repair plan for 1RC8002C for the next Byron Station Unit 1 refueling outage. Third, Exelon stated that it was evaluating enhanced valve diagnostic activities for the next Byron Station Unit 1 refueling outage. The Licensee also noted that, with the help of the vendor it was preparing a formal decision tree with specific criteria to determine the need for repair of 1RC8002C. In their May 27, 2005 letter, Exelon stated that it was developing a long-term plan to identify any additional diagnostic testing or inspection to be performed to assess LSIV performance during future outages. The commitment to develop a plan was entered into the Action Tracking Module of the Passport database as a Regulatory Commitment. The plan was completed on October 14, 2005. In addition, the Staff notes that due to difficulties previously encountered with 1RC80002C closure, the Licensee entered this condition into its Corrective Action Program in March 2002.

Details relating to NRC Staff's consideration and conclusions may be found at ADAMS Accession No. ML051890369.

III. CONCLUSION

In its letter of April 5, 2005, the NRC informed the Petitioner that although there was no immediate safety concern and therefore no basis for taking immediate enforcement action, the NRC had accepted the petition for review.

In determining whether any safety concerns exist regarding operation of Byron Station Unit 1, in light of the past performance of 1RC8002C, NRC Staff considered the previous information provided by the Licensee. With regard to the failure of 1RC8002C and the generation of loose parts from it, the Staff concludes that the Licensee has adequately justified the structural integrity of the valve guides in 1RC8002C. The NRC Staff concludes that there is reasonable assurance that the valve blocks remained in the valves, thus preventing intact valve guides from sliding out of their grooves and into the RCS flow stream. Further, based on its estimate of the stress generated in the valve guides if the guides were misoriented and struck by the valve disc, it is unlikely that the valve guides would be deformed or that their structural integrity would be compromised. Evidence that there has been no physical degradation of 1RC8002C in the past is that during the most recent refueling outage (B1R13), there were no loose parts that were associated with the LSIVs identified during the 10-year inservice inspection of the reactor vessel.

The NRC Staff also considered the effect of loose parts, should they occur, on operation and shutdown of the reactor. It was concluded that large parts would become a factor in the event of an LBLOCA, and then only a small factor in comparison to the consequences of the LBLOCA. Based on the evaluation for the potential of 1RC8002C valve degradation discussed earlier, the Staff also concluded that large loose parts from the Byron Station Unit 1 cold-leg LSIVs have an acceptably low potential of occurrence.

Further, in the event that there are small loose parts in the RCS that could compromise systems used for normal shutdowns, through its compliance with Branch Technical Position RSB 5-1, Byron Unit 1 can be taken from normal operating conditions to cold shutdown using only safety-grade systems with no increase in radiation exposure to the public. With regard to the effect of small loose parts from the 1RC8002C valve that might be carried into the reactor core, the Staff concluded that the expected number of such parts would not affect safe operation of the plant.

Accordingly, the NRC Staff concludes that there is reasonable assurance that safe operation of Byron Station Unit 1 is not endangered by 1RC8002C valve performance.

The NRC Staff has determined that the Petitioner's request for enforcement action concerning a failure to comply with 10 C.F.R. Part 50, Appendix B, Criterion XVI is denied. Appendix B requires licensees to have a quality assurance program that includes structures, systems, and components that prevent

or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. Although the valve body is a part of the primary system pressure boundary, the valve operation does not perform a safety function and is not credited in any of the design-basis accidents. The NRC Staff has concluded that there is reasonable assurance that the internal components of valve 1RC8002C have not degraded to the point of contributing loose parts to the RCS. Exelon has properly entered the 1RC8002C valve performance deficiencies into its corrective action program. Exelon has assessed the valve performance and developed corrective actions with respect to valve 1RC8002C performance. Development of long-term corrective actions, included in the Action Tracking Module of the Passport database as Regulatory Commitments at the Byron Station site, was completed on October 14, 2005. The Licensee intends to monitor valve 1RC8002C performance and has a plan to respond to potential malfunctions. Thus, the performance deficiencies of the 1RC8002C valve and any failure to timely identify and correct those deficiencies do not constitute a violation of Appendix B, Criterion XVI.

The Petitioner is concerned that the Licensee has put excessive emphasis on dose reduction which is compromising safety. NRC licensees are responsible for assuring that maintenance activities for structures, systems, and components are conducted in a manner sufficient to provide assurance that they are capable of performing their intended functions. Licensees are also required to develop a radiation protection program to achieve occupational doses and doses to members of the public that are as low as reasonably achievable (ALARA). However, nothing in the ALARA requirement may be construed as precluding actions that may be necessary to protect health and safety. In this case, the Licensee's deferral of maintenance repairs because of ALARA considerations has not compromised the public health and safety. There is a low probability of valve degradation resulting in the migration of loose parts to the RCS. The Licensee has indicated that the retrieval of loose parts will be addressed on a case-by-case basis, depending on the size and location of the loose part. The Licensee will follow the guidance provided in the Byron Station procedures for investigating, evaluating, and recovering unexpected foreign material. In the event that loose parts are present in the RCS that affect operation of the plant, the plant can be safely shut down.

As provided in 10 C.F.R. § 2.206(c), a copy of this Director's Decision will be filed with the Secretary of the Commission for the Commission to review. As provided for by this regulation, the Decision will constitute the final action of the

Commission 25 days after the date of the Decision unless the Commission, on its own motion, institutes a review of the Decision within that time.

FOR THE NUCLEAR REGULATORY COMMISSION

J.E. Dyer, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 8th day of November 2005.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nils J. Diaz, Chairman
Edward McGaffigan, Jr.
Jeffery S. Merrifield
Gregory B. Jaczko
Peter B. Lyons

In the Matter of **Docket No. 52-007-ESP**

EXELON GENERATION COMPANY, LLC
(Early Site Permit for Clinton ESP Site) **December 12, 2005**

NEPA: CONSIDERATION OF ALTERNATIVES (ENERGY EFFICIENCY); ENVIRONMENTAL IMPACT STATEMENT (NEED)

Energy conservation or efficiency (or ''demand-side management'') is not a reasonable alternative that would advance the goals of the license applicant's project. The purpose of the Applicant's project is to generate electricity selling electricity. Energy efficiency would be a possible ''alternative'' to the project only if the project's purpose was recast (as Intervenors would have it) as meeting ''future energy needs in the area.''

NEPA: CONSIDERATION OF ALTERNATIVES

A reviewing agency should take into account the applicant's goals for the project. *See, e.g., Citizens Against Burlington, Inc. v. Busey,* 938 F.2d 190 (D.C. Cir. 1991), *cert. denied,* 502 U.S. 994 (1991). ''When the purpose is to accomplish one thing,'' the court said in *Citizens Against Burlington,* ''it makes no sense to consider the alternative ways by which another thing might be achieved.'' *Id.,* 938 F.2d at 195.

NEPA: SCOPE OF REVIEW

The Board's finding of fact was not clearly erroneous where the Board found that an alternative facility using a combination of technologies was not environmentally preferable to the proposed nuclear power plant. It was not clear error for the Board to reject Intervenor's theory that the mere number of environmental areas affected by each alternative could show which alternative was preferable.

NEPA: SCOPE OF REVIEW

It is intervenors' burden to show that any claimed mistake in an EIS is significant and material. ''Our boards do not sit to 'flyspeck' environmental documents or to add details or nuances. If the ER (or EIS) on its face 'comes to grips with all important considerations' nothing more need be done.'' *Systems Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-05-4, 61 NRC 10, 13 (2005) (footnote omitted).

NEPA: COST-BENEFIT ANALYSIS

The Board was correct that a cost-benefit comparison among the technological alternatives does not raise a material issue in an ESP proceeding. Because an ESP is only a ''partial'' construction permit and because our regulations expressly postpone any ''benefits'' analysis until later — when there are concrete plans actually to build and operate a nuclear power plant — the Board cannot perform a NEPA cost-benefit analysis in an ESP proceeding. *See Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 47 (2005). Our regulations permit deferral of the ''need for power'' analysis — i.e., the benefits of a nuclear plant. There is no reason to analyze the ''cost'' side of the cost-benefit balance until it comes time — in the combined license proceeding — to consider benefits.

NEPA: COST-BENEFIT ANALYSIS

Our regulations do not prohibit an Early Site Permit applicant from including a cost-benefit analysis, opening the door to litigation on that subject at the ESP stage. That would resolve cost-benefit issues early, but the analysis would still be subject to revision at the combined license stage to reflect changes in technology and economic factors. But where the ESP applicant chooses not to perform the analysis, it is not intervenors' prerogative to introduce the issue at the ESP stage.

MEMORANDUM AND ORDER

Intervenors (Environmental Law and Policy Center, Blue Ridge Environmental Defense League, Nuclear Energy Information Service, Nuclear Information Resource Service, and Public Citizen) seek Commission review of a Licensing Board decision granting summary disposition of the last remaining contested issue in this early site permit (ESP) proceeding — relating to alternative energy sources — and refusing to admit for hearing an amended contention.[1] We deny review.

I. BACKGROUND

In 2003, Exelon filed an application for an ESP for a new nuclear power reactor at the site of an existing reactor in DeWitt County, Illinois. Exelon's environmental report identified the purpose of the project as providing baseload power.[2] The environmental report examined nonnuclear power sources, such as wind, natural gas, and coal, as ''alternatives'' to the project.[3] It noted that NRC regulations do not require a discussion of the ''need for power,''[4] although it included a discussion of the related issue of the ''no action alternative.''[5]

A special ''Contentions'' Board admitted a single contention, Contention 3.1, which challenged Exelon's analysis of alternatives.[6] That contention asserted that the environmental report failed to consider a combination of ''clean'' energy alternatives that would generate an equal amount of power and failed to consider energy conservation as an ''alternative'' to building a new power plant. In admitting the contention, the ''Contentions'' Board narrowed it to include only alternatives that would generate power; the Board did not include energy conservation or efficiency as an alternative.[7] Such an inquiry, the ''Contentions'' Board reasoned, ''essentially equates to a 'need for power' analysis that is outside the scope of this proceeding.''[8] Intervenors sought interlocutory Commission review on the energy efficiency issue, but the Commission turned down the petition without reaching the merits.[9]

---

[1] LBP-05-19, 62 NRC 134 (2005).

[2] *See* Exelon Generation Company, Environmental Report for the EGC Early Site Permit, at 9.2.1 (2003).

[3] *See id.,* ch. 9.

[4] *See* 10 C.F.R. § 52.17(a)(2).

[5] *See* Environmental Report at 9.1-1.

[6] LBP-04-17, 60 NRC 229, 252 (2004).

[7] *Id.* at 245-46.

[8] *Id.* at 245.

[9] CLI-04-31, 60 NRC 461 (2004).

In 2004, in response to an NRC Staff request for additional information (RAI), Exelon submitted additional analysis on the subject of alternative technologies for generating power. The analysis considered combinations of wind and solar technology with coal- and natural gas-fueled facilities that could generate baseload power equivalent to the proposed nuclear facility. Some months later, when the NRC Staff issued its draft environmental impact statement (DEIS), the Staff included as alternatives the combination technology facilities that Exelon had analyzed in its RAI response. The DEIS reached two conclusions that Intervenors now challenge. First, the DEIS said that ''wind and solar power, alone or in combination with other alternatives, are not reasonable alternatives to the proposed ESP facility.''[10] (The DEIS found that any reasonable alternative would have to be primarily fossil fuel fired.[11]) Second, the DEIS concluded that the environmental impacts of a new nuclear facility at the site would be no more than any reasonable combination of power generation technologies because the combination would necessarily involve fossil fuel technologies.[12]

Exelon moved for summary disposition of Contention 3.1. Exelon maintained that its RAI response had cured the original environmental report's claimed failure to analyze alternative power sources.[13] The NRC Staff supported Exelon's motion for summary disposition. Intervenors opposed it, and they also moved to amend their contention to include a challenge to the ''alternatives'' analysis in the RAI response and in the NRC Staff's DEIS.[14] In addition, they reasserted their previous argument that the National Environmental Policy Act (NEPA) requires the NRC to consider energy conservation as an alternative to the proposed project.

The Board, however, agreed with Exelon (and the NRC Staff) that the additional information in Exelon's RAI response cured the omissions described in Contention 3.1.[15] The Board declined to revisit the ''Contentions'' Board's earlier ruling that a NEPA inquiry into energy conservation was outside the scope of this

---

[10] LBP-05-19, 62 NRC at 149, citing NUREG 1815, ''Environmental Impact Statement for an Early Site Permit (ESP) at the Exelon ESP Site, Draft Report for Comment,'' at 8-16 to 8-18 (Feb. 2005). The DEIS found that solar power would require more land than is available at the Clinton site. DEIS at 8-18. And the DEIS pointed out that the closest region in Illinois with sufficient winds to make a wind farm practicable is 25 miles north of the Clinton site. *Id.* at 8-17. The DEIS also noted that the intermittent nature of wind power and the lack of adequate storage technologies limit wind as a source of baseload power. *Id.*

[11] DEIS at 8-22.

[12] *Id.*

[13] *See* Exelon's Motion for Summary Disposition of Contention 3.1 (Mar. 17, 2005).

[14] *See* Intervenor's Motion To Amend Contention 3.1 (Apr. 22, 2005). *See also* DEIS.

[15] *See* LBP-05-19, 62 NRC at 181-83.

proceeding.[16] The Board also held that Intervenors' proposed amended contention did not raise material issues of fact warranting an evidentiary hearing.[17]

II. DISCUSSION

In deciding whether to accept review of a Board decision, the Commission grants review, in its discretion, where the petition for review raises a substantial issue of law, a clearly erroneous finding of fact, or a prejudicial procedural error.[18] Here, Intervenors' petition for review raises a series of detailed and complex questions. In our view, the Board's comprehensive, 57-page decision provides adequate answers to those questions. We see no basis for further Commission review. Consequently, we will instead briefly discuss the chief reasons why we find the Board's decision persuasive.[19]

A. Energy Efficiency as an ''Alternative''

At the outset of this proceeding, the special ''Contentions'' Board found that a provision in our regulations that an ESP applicant need not discuss ''benefits,'' such as ''need for power,'' precluded any need for Exelon to discuss energy efficiency.[20] In their motion to amend their contention, Intervenors again raised an energy efficiency claim. In rejecting Intervenors' amended contention, the Board elaborated on the reasons why NEPA did not require analysis of the energy efficiency ''alternative.''[21] First, the Board reiterated that energy efficiency is a surrogate for the ''need for power,'' an inquiry our regulations expressly declare unnecessary.[22] Second, the Board said that alternatives (like energy efficiency) that would not achieve Exelon's goal (providing additional power to sell on the market) were outside the scope of alternatives that require consideration in an ESP proceeding.[23]

---

[16] *See id.* at 156-60.

[17] *See id.* at 160-79.

[18] *See* 10 C.F.R. § 2.341(b)(4).

[19] Intervenors (*e.g.,* Petition at 2-3) and Exelon (e.g., Exelon Answer at 2-3) argue this case as if we should decide whether the Board may have rendered ''clearly erroneous'' findings of fact. But the Board held no evidentiary hearing and made no ''findings of fact'' as such. This case was decided on summary disposition, and on the inadmissability of Intervenors' late contention. This Board decision warrants considerable deference, however. The Board heard from the parties at oral argument, worked with the record over a period of many months, and issued a lengthy and thorough opinion.

[20] *See* LBP-04-17, 60 NRC at 245-46.

[21] *See* LBP-05-19, 62 NRC at 156-60.

[22] *See id.* at 159, citing 10 C.F.R. §§ 52.17(a)(2), 52.18.

[23] *See id.* at 156-58.

These reasons are sufficient to eliminate further consideration of energy efficiency from the environmental analysis here. We agree with the Board that energy conservation or efficiency — or, as it is sometimes called, ''demand-side management'' — is not a reasonable alternative that would advance the goals of the Exelon project.[24] Intervenors complain that the Board ''blindly adopted'' Exelon's goal of creating baseload power in defining the scope of the project.[25] Energy efficiency would be a possible ''alternative'' to the project only if the project's purpose was recast (as Intervenors would have it) as meeting ''future energy needs in the area.''[26] But, as the Board indicated, Exelon has a limited purpose — selling electricity; it is not ''engaged in the whole panoply of electric industry functions.''[27]

The Board cited extensive case law supporting the proposition that a reviewing agency should take into account the applicant's goals for the project.[28] The lead case is *Citizens Against Burlington, Inc. v. Busey,*[29] where the D.C. Circuit held that ''[a]n agency cannot redefine the goals of the proposal that arouses the call for action; it must evaluate the alternative ways of achieving its goals, shaped by the application at issue and by the function that the agency plays in the decisional process.''[30] ''When the purpose is to accomplish one thing,'' the court said in *Citizens Against Burlington,* ''it makes no sense to consider the alternative ways by which another thing might be achieved.''[31]

Here, the Board rightly stressed that neither the NRC nor Exelon has the mission (or power) to implement a general societal interest in ''energy efficiency.''[32] As

---

[24] Arguably, the parties and the Board need not have considered alternative energy sources at all. In *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5 (2005), we held that licensing boards conducting ''mandatory hearings'' in ESP cases must consider alternative *sites,* not alternative energy sources. *Id.* at 48. As indicated in our prior decision, a Board need not address alternative energy sources in a mandatory ESP hearing, consistent with 10 C.F.R. §§ 52.17(a)(2) and 52.18. Similarly, an ESP applicant need not address alternative energy sources in its environmental report. However, when (as here) an ESP applicant chooses to address alternative energy sources and to obtain agency consideration of its alternative energy source assessment, that issue becomes material to the adjudication and is appropriate for litigation on properly grounded contentions.

[25] Petition at 11.

[26] *Id.*

[27] LBP-05-19, 62 NRC at 152.

[28] *See id.* at 156-58.

[29] 938 F.2d 190 (D.C. Cir. 1991), *cert. denied,* 502 U.S. 994 (1991).

[30] *Id.* at 199. *Accord Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 55-56 (2001).

[31] *Citizens Against Burlington,* 938 F.2d at 195. As an example the court said that requiring the NRC to discuss ''imports of hydropower from Quebec'' as an alternative to locating a nuclear reactor in Vermont would reduce the EIS to ''frivolous boilerplate.'' *Id.*

[32] LBP-05-19, 62 NRC at 152, 156-60.

the Board indicated, all that is before the NRC is Exelon's application for an ESP for a potential nuclear plant to generate additional power to sell on the open market: Exelon's ''sole business is that of the generation of electricity and the sale of energy and capacity . . . at wholesale. . . . [It] has no transmission or distribution system of its own and no direct link to the ultimate consumer.''[33] Thus, while it makes some sense to inquire into various nonnuclear options for generating power — and Exelon and the NRC Staff have done so — the NEPA ''rule of reason'' does not demand an analysis of what the Board called the ''general goal'' of energy efficiency.[34]

Trying to demonstrate a flaw in the Board's legal analysis, Intervenors point to a few cases where reviewing courts indicated that an agency may not define a project's goal too narrowly. But Intervenors' cases do not undercut the Board's result in this case.

For example, *Simmons v. U.S. Army Corps of Engineers*[35] involved an application by the City of Marion, Illinois, for Army Corps of Engineers' approval of a new reservoir to provide water to both Marion and a nearby water district. Stating that NEPA requires a look at ''alternative means to accomplish the general goal of an action,'' the Seventh Circuit rebuked the Army for its ''wholesale acceptance'' of the city's proposal to build a single reservoir.[36] The court held that the Army should also have considered the ''not absurd'' alternative of supplying water ''from two or more sources.''[37] In our case, though, where the problem is supplying additional power, Exelon and the NRC Staff indisputably already *have* examined various power sources as alternatives to Exelon's proposed nuclear plant — including fossil, solar, wind, and ''combined'' technologies. To require consideration of conservation as well would ignore entirely the purpose of Exelon's proposed facility — producing more power. It would be as if in *Simmons* the Seventh Circuit ordered the Army not only to consider alternative ways to supply more water but also to examine whether Marion and the water district could reduce their need for water by prohibiting lawn watering or requiring low-flow toilets. Nothing in *Simmons* requires a NEPA inquiry so far afield from the original proposal.

Another of Intervenors' authorities, *Colorado Environmental Coalition v. Dombeck,*[38] serves them no better. In that case, the applicant wanted, over the objection of the Colorado Environmental Coalition, to expand a ski area on United States Forest Service land in Vail, Colorado. Although the Tenth Circuit stated as

---

[33] *Id.* at 152.

[34] *See id.* at 159.

[35] 120 F.3d 664 (7th Cir. 1997).

[36] *Id.* at 669.

[37] *Id.*

[38] 185 F.3d 1162 (10th Cir. 1989).

a general principle that the agency cannot blindly adopt an applicant's articulated purpose, it rejected the Coalition's argument that the Forest Service should have considered the Coalition's proposed ''conservation biology alternative,'' which would not have significantly increased the terrain available for skiing. The court said that the agency's alternatives analysis, which focused only on those alternatives that would increase the area available for skiing, was adequate under NEPA.[39]

The same is true here. Just as it was reasonable in *Colorado Environmental Coalition* to confine the NEPA ''alternatives'' inquiry to potential ski areas, it is reasonable here to confine the inquiry to potential sources of power. Exelon and the NRC Staff were not obliged to examine general efficiency or conservation proposals that would do nothing to satisfy this particular project's goals.

B. Information in the DEIS

The remainder of Intervenors' petition for review claims, in essence, that the Board erred in ordering summary disposition, and in rejecting Intervenors' proposed amendment of their petition, in the face of material issues of fact. We disagree. Intervenors overlook their obligation under our pleading regulations to offer ''specific'' contentions on ''material'' issues, supported by ''alleged facts or expert opinion.''[40] NRC contention-pleading rules are ''strict by design,''[41] and contemplate ''a clear statement as to the basis for the contentions and the submission of . . . supporting information and references to specific documents and sources that establish the validity of the contention.''[42] Mere ''notice pleading'' does not suffice.[43]

---

[39] *Colorado Environmental Coalition* is different from our case in that the Forest Service apparently had within its power the option to implement a conservation biology alternative on land under its control. The NRC, of course, has no means to enforce energy efficiency in Illinois. Neither, to all appearances, does Exelon. Intervenors maintain that because Commonwealth Edison, a public utility in Illinois, is a subsidiary of the same parent company as Exelon's parent company, Exelon in fact is in a position to implement energy efficiency programs. *See* Petition at 14-15. But Intervenors made no showing that Exelon has a peculiar ability to influence its sister corporation, Commonwealth Edison, or that the conservation proposals that Intervenors favor — such as tax incentives by the state and federal governments — lay within Exelon's (or Commonwealth Edison's) purview.

[40] *See* 10 C.F.R. § 2.309(f).

[41] *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001).

[42] *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155-56 (1991).

[43] *See Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 428 (2003).

The Board's decision considered each of Intervenors' claims, point-by-point, and thoroughly explained why they fell short of raising a material issue requiring further litigation. It is not necessary for us to recapitulate the Board's reasoning in detail.

At the outset, it is worthwhile to list several aspects of the record that provided the underpinnings of the Board's ''materiality'' analysis:

- In order to satisfy the purpose of the project, and thus to constitute a reasonable alternative, the combined facility must be able to generate power in the amount of 2180 MW at all times.[44]
- Because wind and solar power cannot reliably generate power at all times the fossil-fueled portions of the facility would have to have a capacity of 2180 MW.[45]
- Due to the impacts of fossil-fueled facilities, a combination of wind and solar with a 2180-MW fossil-fueled facility is not environmentally preferable to the proposed nuclear power plant.[46]
- The DEIS found that the wind or solar *portions* of the analyzed combination facility would have no environmental impacts.[47]

With these considerations in mind, we turn now to the specific ''materiality'' points Intervenors raise in their petition for review.

1. Number of Areas Affected

Intervenors claim that the Board ought to have recognized that an alternative that (as the NRC's DEIS found) has ''small'' impacts on fewer resources must be environmentally preferable to an alternative that has ''small'' impacts on a greater number of resources.[48] In the DEIS, the Staff looked at the impact of the various energy-generating alternatives on a range of environmental resources, characterizing the impacts on those resources as ''small,'' moderate,'' or ''large.'' While the impacts for both the proposed nuclear plant and the ''clean'' alternatives that Intervenors prefer were characterized as ''small'' in most areas, Intervenors argue that the sheer number of resources affected — greater for nuclear power plants — determines which alternative is environmentally preferable.

---

[44] *See* LBP-05-19, 62 NRC at 157-58.

[45] *See id.* at 165 (''there are undoubtedly times at night (no solar power production) when the wind will not be blowing'').

[46] *See id.* at 166, 170.

[47] *See id.* at 172.

[48] Petition at 15-16.

But as the Board pointed out, the DEIS did not compare the proposed nuclear facility to an exclusively solar- or wind-powered facility — such facilities cannot reliably supply power at all times — but to a combination facility that would generate baseload power equivalent to a nuclear power plant's power production.[49] Combination facilities are powered (in part) by fossil fuel technologies and it was that aspect of such facilities that tilted the environmental analysis away from the combination facility.[50] Because a solely wind- or solar-powered facility could not satisfy the project's purpose, there was no need to compare the impact of such facilities to the impact of the proposed nuclear plant. And, most significantly, despite our pleading rule requiring factual or expert support for contentions, Intervenors ''presented no impact analyses whatsoever to support their proposition that because one or another alternative has numerically more areas impacted, the overall environmental impact is greater.''[51] As the Board concluded, this portion of Intervenors' contention amounts to ''bare assertion.''[52]

The Board therefore reasonably rejected Intervenors' ''comparative impacts'' claims, and we see no basis for examining the issue further.

2. Overstatement of Environmental Impact of a ''Combination'' Facility

Intervenors argue that although the DEIS examined a facility that could ''combine'' technologies to create the desired amount of baseload power, it overestimated the environmental impact of such a combination.[53] Specifically, Intervenors argue that: (1) the Board's decision rested on a ''faulty premise'' that natural gas would have greater environmental impact than nuclear power; (2) the ''combination'' the Staff used should have allocated a greater proportion to wind power; and (3) the Board should have acknowledged that a facility having a full 2180 MW of fossil fuel-fired capacity *with an additional* wind or solar component would have greater benefits because the wind or solar component could produce additional power even if the fossil fuel component were operating at capacity.

Again, though, Intervenors' position comes down to ''bare assertion lacking any support and the requisite specificity.''[54] Intervenors point to a number of scenarios and supposed environmental effects, but in the end they offer ''[n]othing . . . to indicate that any of these effects have been even superficially analyzed by them to support [their] assertion.''[55] And, as the Board held, Intervenors' various

---

[49] *See* LBP-05-19, 62 NRC at 169-71.

[50] *See id.*

[51] *Id.* at 172.

[52] *Id.*

[53] Petition 20-22.

[54] LBP-05-19, 62 NRC at 172.

[55] *Id.* at 173.

claims fail to come to grips with fundamental points that can't be disputed: solar and wind power, by definition, are not always available; in combination plants the fossil-fired components certainly will run some of the time; and the DEIS gave full credit (it assumed *no* adverse environmental impacts) to wind and solar components of a combined plant.[56]

There may, of course, be mistakes in the DEIS, but in an NRC adjudication, it is Intervenors' burden to show their significance and materiality. ''Our boards do not sit to 'flyspeck' environmental documents or to add details or nuances. If the ER (or EIS) on its face 'comes to grips with all important considerations' nothing more need be done.''[57] Intervenors' ''environmental impact'' claims are for the most part not specific and not grounded in fact or expert opinion. The claims do not suggest significant environmental oversights that warrant further inquiry at an evidentiary hearing.

3. Failure To Conduct a Cost-Benefit Analysis

Intervenors argue that the Board ought to have found a genuine material dispute regarding the comparative cost of nuclear power and clean energy alternatives.[58] The Board found as a matter of law that no disputes concerning the relative costs of nuclear power versus other technologies could raise a material dispute.[59] The Board held that an economics-driven cost comparison among alternative technologies is a matter that our regulations postpone until the construction permit/operating license stage.[60]

The Board was correct that a cost-benefit comparison among the technological alternatives does not raise a material issue in an ESP proceeding. On the same day as the Board's decision, we issued our decision in CLI-05-17 (regarding issues to be considered at ''mandatory hearings''). There, we expressly stated that because an ESP is only a ''partial'' construction permit and because our regulations expressly postpone any ''benefits'' analysis until later — when there are concrete plans actually to build and operate a nuclear power plant — the Board cannot perform a NEPA cost-benefit analysis in an ESP proceeding.[61] As permitted by our regulations, Exelon's Environmental Report did not include a ''need for power'' analysis — i.e., the benefits of a nuclear plant — but deferred the issue until the future combined license proceeding. There is no apparent

---

[56] *See id.* at 171.

[57] *Systems Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-05-4, 61 NRC 10, 13 (2005) (footnote omitted).

[58] Petition at 17-20.

[59] *See* LBP-05-19, 62 NRC at 168-69.

[60] *See id.* at 167, citing 10 C.F.R. §§ 52.17(a)(2), 52.18.

[61] *See* 62 NRC at 47.

reason to analyze the ''cost'' side of the cost-benefit balance until it comes time — in the combined license proceeding — to consider benefits.

Intervenors argue that the granting of an early site permit constitutes a ''major federal action'' that requires a full NEPA analysis now, including a weighing of costs versus benefits. They argue that putting off this decision until Exelon applies for a combined license would ''risk . . . *post hoc* rationalization.''[62] This argument amounts to an impermissible collateral attack on our ESP regulations, which permit (and appear to encourage) deferral of the cost-benefit analysis.[63] Our regulations make obvious sense. The various factors affecting economic costs and benefits could change dramatically between the time that an early site permit is granted and a combined license is sought. There is no reason to require a cost-benefit analysis at the preliminary ESP stage of power plant licensing.

Intervenors point out that the regulation merely states that a discussion of benefits is not *necessary* at this time, but appears not to *prohibit* that discussion.[64] This argument is true, but it does not help Intervenors here. At the most it means that Exelon might have included a cost-benefit analysis at this stage, opening the door to litigation on that subject. That would resolve cost-benefit issues at this stage, but the analysis would still be subject to revision at the combined license stage to reflect changes in technology and economic factors. But Exelon chose not to perform the analysis, and it is not Intervenors' prerogative to introduce the issue at this juncture.

III. CONCLUSION

For the foregoing reasons, the petition for review is *denied.*
IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 12th day of December 2005.

[62] Petition at 19.
[63] *See* 10 C.F.R. § 2.335(a).
[64] *See id.*

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Alex S. Karlin, Chairman
Dr. Anthony J. Baratta
Lester S. Rubenstein

In the Matter of **Docket No. 50-271-OLA**
(ASLBP No. 04-832-02-OLA)

ENTERGY NUCLEAR VERMONT YANKEE, LLC, and ENTERGY NUCLEAR OPERATIONS, INC.
(Vermont Yankee Nuclear Power Station)

December 2, 2005

The Board grants the Intervenor's motion for leave to file a new contention under 10 C.F.R. § 2.309(f)(2) and finds that the contention is admissible under 10 C.F.R. § 2.309(f)(1).

RULES OF PRACTICE: NEW OR AMENDED CONTENTIONS; TIMELINESS

A motion for leave to file a new contention, filed within the 20-day time period previously set by the Board, satisfies the requirement of 10 C.F.R. § 2.309(f)(2)(iii) that such motions be filed in a ''timely fashion.''

RULES OF PRACTICE: CONTENTIONS; TIMELY CONTENTIONS VS. NONTIMELY FILINGS

If a new contention is ''timely'' under 10 C.F.R. § 2.309(f)(2)(iii), then it appears contradictory to rule that it must also satisfy the eight factors specified in 10 C.F.R. § 2.309(c) for ''nontimely filings.''

RULES OF PRACTICE: CONTENTIONS; ADMISSIBILITY; BASES

Section 2.309(f)(1)(ii) of 10 C.F.R. merely requires that the proponent provide ''a brief explanation of the basis for the contention.'' The four ''bases'' proffered by the Intervenor, when read together, satisfy this requirement.

RULES OF PRACTICE: ADMISSIBILITY; SCOPE OF PROCEEDING

While the compliance of a facility with its current licensing basis is not within the scope of a license amendment proceeding, the ability of the facility, in its unchanged current physical condition, to perform satisfactorily at the requested increased power plant level, is within the scope in accordance with 10 C.F.R. § 2.309(f)(1)(iii).

RULES OF PRACTICE: SELECTION OF HEARING PROCEDURES

Even though none of the parties addressed the question of which hearing procedures should apply to the new contention, 10 C.F.R. § 2.310 requires the Board to select the appropriate hearing procedure for each admitted contention. The Board, in its discretion, rules that Subpart L, which is being used for all of the previously admitted contentions, should be applied to the new contention.

MEMORANDUM AND ORDER
(Admitting Intervenor's New Contention)

Before the Board is a request by the New England Coalition (NEC) for leave to file a new contention.[1] For the reasons stated below, the Board grants the request and finds NEC's new contention admissible under 10 C.F.R. § 2.309(f) and (c).

[1] New England Coalition's Request for Leave To File a New Contention (Sept. 21, 2005) [NEC Request].

I. PROCEDURAL POSTURE

In September 2003, Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (collectively, Entergy) submitted an extended power uprate (EPU) application to the U.S. Nuclear Regulatory Commission for Entergy's Vermont Yankee Nuclear Power Station in Windham County, Vermont. On August 30, 2004, NEC challenged the proposed EPU by filing a request for a hearing that included seven proposed contentions.[2] On November 22, 2004, this Board admitted several of NEC's contentions, including NEC's Contention 4, which we restated as follows:

> The license amendment should not be approved because Entergy cannot assure the seismic and structural integrity of the cooling towers under uprate conditions, in particular the Alternate Cooling System cell. At present the minimum appropriate structural analyses have apparently not been done.

LBP-04-28, 60 NRC 548, 580 (2004). That contention focused ''on the alleged need for Entergy to perform a seismic and structural analysis of the cooling towers under the proposed uprated conditions.'' *Id.* at 573.

Subsequently, Entergy performed a structural and seismic analysis of the cooling towers and the Alternate Cooling System (ACS) that addressed the cooling tower upgrades associated with the proposed EPU.[3] The analysis, referred to by Entergy as ''VYC-2413, Rev. 0 — Seismic Calculation'' and performed by ABSG Consulting, is referred to herein as the ''ABS Report.''[4] Entergy then filed a motion to dismiss NEC Contention 4 as moot, or in the alternative, for summary disposition.[5] The NRC Staff supported Entergy's motion.[6]

On September 1, 2005, the Board granted Entergy's motion and dismissed NEC Contention 4 as moot, ruling that it was essentially a ''contention of omission'' and that the ABS Report had cured the omission. LBP-05-24, 62 NRC 429, 431-32 (2005). However, we recognized that the language in NEC Contention 4 also suggested a qualitative challenge, and thus specified that, ''if NEC moves for leave to file new or amended contentions challenging the adequacy of Entergy's seismic and structural analysis within 20 days of the date of this order, then

---

[2] New England Coalition's Request for Hearing, Demonstration of Standing, Discussion of Scope of Proceeding and Contentions (Aug. 30, 2004) [NEC Original Petition].

[3] Entergy Motion To Dismiss, Declaration of George S. Thomas (July 10, 2005), ¶ 9.

[4] Entergy's Response to the New England Coalition's Request for Leave To File a New Contention (Oct. 19, 2005) at 3 n.8 [Entergy Answer].

[5] Entergy's Motion To Dismiss as Moot, or in the Alternative, for Summary Disposition of NEC's Contention 4 (July 13, 2005).

[6] *See* NRC Staff's Answer to Entergy's Motion To Dismiss as Moot, or in the Alternative, for Summary Disposition of New England Coalition Contention 4 (July 25, 2005).

the motion and contentions will be deemed timely for purposes of 10 C.F.R. § 2.309(f)(2)(iii).'' LBP-05-24, 62 NRC at 433.

On September 21, 2005, NEC filed its request for leave to file a new contention. The NRC Staff responded with its answer on October 17, 2005, and did not oppose admission of the new contention.[7] Entergy's answer on October 19, 2005, opposed its admission.[8] NEC filed its reply on October 26, 2005.[9]

II. POSITIONS OF THE PARTIES

NEC's newly proffered contention reads as follows:

> The Entergy Vermont Yankee [ENVY] license application (including all supplements) for an extended power uprate of 20% over rated capacity is not in conformance with the plant specific original licensing basis and/or 10 CFR Part 50, Appendix S, paragraph I(a), and/or 10 CFR Part 100, Appendix A, because it does not provide analyses that are adequate, accurate, and complete in all material respects to demonstrate that the Vermont Yankee Nuclear Power Station Alternate Cooling System [ACS] in [*sic*] entirety, in its current actual physical condition (or in the actual physical condition ENVY will effectuate prior to commencing operation at EPU), will be able to withstand the effects of an earthquake and other natural phenomena without loss of capability to perform its safety functions. ENVY must be able to demonstrate that the actual structures, systems and components comprising the ACS will perform satisfactorily in service at the requested increased plant power level.

NEC Request at 1.

NEC proffered four ''bases'' in support of this contention.[10]

> (1) ''[T]he Alternate Cooling System and its components are not seismically qualified and ENVY has not provided analyses that are adequate, accurate, and complete in all material respects which contravene this assertion and demonstrate that the actual structures, systems and components comprising the ACS will perform satisfactorily in service at the requested increased plant power level;''[11]

---

[7] NRC Staff Answer to New England Coalition Request for Leave To File a New Contention (Oct. 17, 2005) [Staff Answer].

[8] Entergy's Response to the New England Coalition's Request for Leave To File a New Contention (Oct. 19, 2005) [Entergy Answer].

[9] New England Coalition's Reply to Applicant and NRC Staff Answers to New England Coalition's Request for Leave To File a New Contention (Oct. 26, 2005) [NEC Reply].

[10] 10 C.F.R. § 2.309(f)(1)(ii) requires a ''brief explanation of the basis for the contention.''

[11] NEC Request at 2.

(2) ''The alternate cooling system is (and it [*sic*] comprised of) structures, systems and 'components important to safety' which must be able to withstand the effects of natural phenomena, such as earthquakes, without loss of capability to perform their safety functions. They must also be able to perform satisfactorily in service at the requested increased plant power level;''[12]

(3) ''ENVY must provide documentation, per 10 CFR 50.9(a), that, e.g., the ACS under uprate condition will be in compliance with the original design basis as licensed by the Commission and that the actual structures, systems and components comprising the ACS will perform satisfactorily in service at the requested increased plant power level;''[13] and

(4) ENVY's ''sole evaluation'' of seismic qualification of the ACS — the ABS report — ''is *not* adequate, accurate, and complete in all material respects, and does not demonstrate that the [ACS] in its current actual physical condition (or in the actual physical condition ENVY effectuates prior to commencing operation at EPU) will be able to withstand the effects of a Safe Shutdown or Design Basis earthquake and other natural phenomena without loss of capability to perform its safety functions.''[14]

As supporting evidence for its contention, NEC submitted the declaration of Dr. Ross B. Landsman, who expressed his professional opinion that the ABS Report is ''grossly deficient'' in seven respects:

(a) ABS did not conduct a physical examination of the alternate cooling tower cell;

(b) ABS's report lacks adequate documentation of the breaking strength of the tie rods;

(c) ABS's report does not use added conservatism in accounting for the effects of aging mechanisms and/or moisture and/or cooling system chemicals;

(d) ABS's structural analysis fails to assign a negative value to the replacement rate for degraded members;

(e) ABS's report fails to account for changes to ACS after the report was completed;

(f) ABS relies on incorrect and non-conservative assumptions concerning the condition of the concrete in the alternate cooling tower cell and fails to take into account the unanalyzed effects of recent modification including steel splices; and

[12] *Id.* at 3.
[13] *Id.*
[14] *Id.* at 3-4.

(g) ABS does not provide reasonable assurance of seismic qualification of the ACS.

NEC Request at 5-6.

As to the timeliness of its new contention under 10 C.F.R. § 2.309, NEC contends that it never considered the ABS Report as satisfying the complaint of NEC's original Contention 4 (i.e., the ''minimum appropriate structural analyses'' of the ''structural integrity of the cooling towers under uprate conditions,'' NEC Original Petition at 11), and therefore did not believe, until the Board's September 1, 2005 ruling, that a new or amended contention was necessary. NEC Request at 14. NEC argues that the Board ruled that a request for leave to file new contentions would be timely if filed within 20 days and that it has met this requirement. *Id.* at 15.

Entergy opposes NEC's request, arguing that the new contention is untimely, impermissibly broad and vague, and lacks factual basis. Entergy Answer at 4. Entergy urges the Board to find the contention untimely on two grounds. First, Entergy suggests that the '' 'new' information on which it is based was available for four months before the proposed new contention was submitted'' and thus that NEC failed to submit the new contention ''in a timely fashion'' as required by 10 C.F.R. § 2.309(f)(2)(iii). *Id.* Entergy states that ''[p]etitioners have an 'ironclad obligation to examine the publicly available documentary material pertaining to the facility in question with sufficient care to enable the petitioner to uncover any information that could serve as the foundation for a specific contention.' ''[15] According to Entergy, NEC's obligation to submit a new contention challenging the adequacy of the ABS Report began on May 25, 2005, when the report was submitted to the NRC.[16] Entergy suggests that, at the time of its September 1, 2005 Order, the Board may not have been aware of the fact that the ABS Report had been filed in May 2005. Entergy Answer at 6. Second, Entergy argues that the new contention is untimely because it raises new issues on matters that have been ''unchanged, on the record'' since the initial filling of the application, *id.* at 4, and because it is an ''attempt to raise new issues that go far beyond the adequacy of the Seismic Calculation.'' *Id.* at 7. Entergy lists some of the deficiencies alleged by NEC, and suggests that the contention ''does not link these deficiencies to any new information.'' *Id.* at 8.

Next, Entergy claims that NEC's proposed new contention fails to satisfy the requirements of 10 C.F.R. § 2.309(f)(1)(vi). *Id.* at 10. Finding NEC's definition of ACS overbroad, and citing a failure to identify specific analyses or components that are inadequate or deficient, Entergy asks the Board to reject the proposed

[15] Entergy Answer at 5-6 (citing *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 382 & n.42 (2002)).

[16] The record does not reflect when the ABS Report became available to NEC.

contention as both overbroad and vague. *Id.* Finally, Entergy asserts that NEC's ''proposed contention lacks factual basis,'' *id.* at 11, and challenges the alleged deficiencies identified by Dr. Landsman in NEC's Request. *Id.* at 12-30.

The NRC Staff does not oppose the admission of NEC's new contention. Staff Answer at 8. The Staff acknowledges that the contention appears to be timely, that it ''appears to satisfy'' the other requirements of 10 C.F.R. § 2.309(f)(2), and seems to agree that, under the balancing factors of 10 C.F.R. § 2.309(c), the contention is satisfactory. Staff Answer at 6-7. Finally, the Staff concludes that the new contention satisfies the requirements of 10 C.F.R. § 2.309(f)(1) except ''insofar as NEC takes issue with the 'current actual physical condition' of the ACS,'' which the Staff asserts is ''outside the scope of this proceeding.'' *Id.* at 8.

III. ADMISSIBILITY OF PROPOSED CONTENTION

A. 10 C.F.R. § 2.309(f)(2) Analysis: New Contentions

Our analysis begins with the Commission's regulations for admissibility of ''new contentions.'' This new regulation[17] allows for a ''new contention'' to be filed upon a showing that:

> (i) The information upon which the amended or new contention is based was not previously available;
>
> (ii) The information upon which the amended or new contention is based is materially different than information previously available; and
>
> (iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.

10 C.F.R. § 2.309(f)(2)(i)-(iii).

The three requirements listed above do not alleviate the Petitioner's burden to demonstrate that the new contention meets the standard admissibility requirements of 10 C.F.R. § 2.309(f)(1)(i)-(vi). Rather, the requirements of 10 C.F.R. § 2.309(f)(2)(i)-(iii) provide additional timing and procedural requirements governing the admissibility of new contentions.

The Board finds that NEC's proposed contention satisfies the three criteria required by 10 C.F.R. § 2.309(f)(2). As an initial matter, the contention was filed in a ''timely fashion,'' as required by 10 C.F.R. § 2.309(f)(2)(iii). For reasons stated in our September 1, 2005 Order (e.g., the qualitative aspects of the original Contention 4), we provided NEC a 20-day window to request leave to file a new contention regarding the adequacy of the ABS Report. LBP-05-24, 62 NRC at 433. The Order provided that any such contention filed within the specified

[17] Section 2.309(f)(2) was added in 2004. 69 Fed. Reg. 2182, 2240 (Jan. 14, 2004).

time frame would be deemed timely pursuant to 10 C.F.R. § 2.309(f)(2)(iii) and (c)(1)(i). *Id.* at 5-6. The fact that Entergy submitted the ABS Report to the NRC in May 2005 was known to the Board at the time of our September 1, 2005 Order[18] and provides no basis to revisit the timeliness issue now.

The remaining subsections of 10 C.F.R. § 2.309(f)(2) are clearly met. The new contention challenges the sufficiency of the ABS Report, which, because it filled a prior omission, necessarily constitutes ''information . . . not previously available.'' 10 C.F.R. § 2.309(f)(2)(i). And since something is obviously different than nothing, the ABS Report is also ''information . . . materially different than information previously available.'' 10 C.F.R. § 2.309(f)(2)(ii).

Entergy argues that ''none of the alleged deficiencies was raised by the NEC in its original Request for Hearing'' and that the new contention is untimely under 10 C.F.R. § 2.309(f)(2) because ''in the absence of subsequently developed information, NEC is not allowed to raise new issues now.'' Entergy Answer at 8. This position is untenable. Originally, there was no seismic analysis of the ACS, and NEC asserted that ''Entergy cannot assure the seismic and structural integrity'' of the ACS because ''the minimum appropriate structural analyses'' had not been done. NEC Original Petition at 11. Entergy has now done a seismic analysis and NEC is challenging it because it allegedly fails to take into account various factors, such as documentation of the breaking strength of tie rods; the effects of aging mechanisms, moisture, and chemicals on the ACS; changes in the ACS since the ABS Report; and nonconservative assumptions about concrete and steel splices.[19] NEC Request at 7. We conclude that NEC raised the seismic issue, to the extent possible, in its original contention of omission and has continued to pursue the issue now, by alleging various deficiencies in the ABS Report.[20]

---

[18] The May 2005 submission of the ABS Report was referenced in Entergy's Motion To Dismiss as Moot.

[19] For example, NEC's expert, Dr. Landsman, states that ''[t]he ABS Consulting report fails to take into account the effects of lack of adequate documentation of the breaking strength of the tie rods connecting the seismic and non-seismic cells'' and that ''ABS has no basis to conclude that the collapse of one or more cells would not propagate through additional cells.'' NEC Request at 7. In addition, NEC alleges that the ''ABS Consulting seismic evaluation and accompanying materials do not include that ABS took into account the actual 'as found' physical condition of the cooling towers at issue as there is an absence of additional conservatisms to account for the effects of aging and/or moisture and/or cooling system chemicals and/or biotic action on the wooden structural members, steel connecting hardware, reinforcement rods and concrete within tower basins.'' *Id.*

[20] We reject Entergy's assertion that ''it has been Entergy's position from the start that the ACS is adequate to perform its safety function, and that it does not need to be part of the proposed uprate. *That position has not been previously challenged by NEC,* and any such challenge at this late date would be *grossly untimely.*'' Entergy Answer at 13 (emphasis added). It is clear to this Board that NEC's original Contention 4 challenged Entergy's position on this point from the very outset of this

(Continued)

B. 10 C.F.R. § 2.309(c) Analysis: Nontimely Filings

The Staff asserts that the proposed new contention must also pass the eight-factor balancing test specified for ''nontimely filings'' in 10 C.F.R. § 2.309(c)(1), Staff Answer at 3, as follows:

> (i) Good cause, if any, for the failure to file on time;
> (ii) The nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding;
> (iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding;
> (iv) The possible effect of any order that may be entered in the proceeding on the requestor's/petitioner's interest;
> (v) The availability of other means whereby the requestor's/petitioner's interest will be protected;
> (vi) The extent to which the requestor's/petitioner's interests will be represented by existing parties;
> (vii) The extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding; and
> (viii) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record.

Given that we have just held that NEC's new contention is ''timely'' under 10 C.F.R. § 2.309(f)(2)(iii), it appears contradictory to rule that NEC must now also satisfy the eight additional balancing factors of 10 C.F.R. § 2.309(c) for ''nontimely'' filings.[21] Tellingly, not even Entergy asserts that NEC's new contention must also meet 10 C.F.R. § 2.309(c).

Assuming arguendo that 10 C.F.R. § 2.309(c) applies to timely new contentions, we conclude, after balancing the eight factors, that 10 C.F.R. § 2.309(c) should not bar the admission of NEC's proposed contention. The Staff agrees. Staff Answer at 7. As acknowledged by the Staff, the first factor — whether good cause exists for failure to file on time — is entitled to the most weight. *State of New Jersey* (Department of Law and Public Safety), CLI-93-25, 38 NRC 289, 296 (1993). The fact that this new contention is based on material information

---

proceeding. Subsequently, NEC has continued to litigate this point as the issue has evolved from focusing on the *absence* of any seismic analysis, to the *quality* of the analysis that was subsequently submitted.

[21] This inconsistency was noted in our January 11, 2005 order at 4 n.5. It is neither logical nor sensible to impose only eight conditions on the admissibility of a contention based on old information and where the proponent has, through his own inadvertence, forgotten to raise it, and yet impose even more hurdles (three plus eight) on a contention based on new information where the proponent is blameless and prompt. This situation contrasts sharply with permissive intervention, as specified in 10 C.F.R. § 2.309(e) and Rule 24(b) of the Federal Rules of Civil Procedure.

that was not previously available, and that it was ''timely'' under 10 C.F.R. § 2.309(f)(2), shows ''[g]ood cause, if any, for the failure to file on time'' under 10 C.F.R. § 2.309(c)(1)(i).

As to the remaining seven factors of 10 C.F.R. § 2.309(c)(1), NEC has been found to have standing and to have submitted at least one admissible contention; therefore, the factors in 10 C.F.R. § 2.309(c)(1)(ii) (nature of NEC's right to be made a party), (iii) (nature of the NEC's interest in the proceeding), and (vi) (NEC is an existing party), support the admission of this new contention. Pointing to the absence of contentions related to the seismic analysis of the ACS by the State of Vermont, NEC asserts that no other party is capable of protecting its interests, NEC Request at 15-16, thereby satisfying 10 C.F.R. § 2.309(c)(1)(v) (nonavailability of other means to protect the NEC's interest).[22] NEC has filed its contention with the aid of Dr. Ross B. Landsman, and has asserted that his service as an expert witness ''can assist the Board to develop a sound record on [the] proposed Alternate Cooling System Contention.'' We agree and conclude that 10 C.F.R. § 2.309(c)(1)(viii) is satisfied. Given that NEC has raised concerns about the adequacy of the seismic and structural analysis of the ACS from the outset, we find that 10 C.F.R. § 2.309(c)(1)(iv) (the possible effect of any order that may be entered in the proceeding on its interests), and 10 C.F.R. § 2.309(c)(1)(vii) (the extent to which litigation of this issue will broaden the issues or delay the proceeding), favor the admission of this contention. On balance, if it is applicable at all, we conclude that the request for leave to file the proposed new contention satisfies the requirements of 10 C.F.R. § 2.309(c)(1).

C. 10 C.F.R. § 2.309(f)(1) Analysis: Basic Requirements for Contentions

In addition to satisfying the timeliness requirements, the substance of NEC's contention must be evaluated as to whether it satisfies the basic contention admissibility standards of 10 C.F.R. § 2.309(f)(1). We apply these regulatory criteria in accordance with the principles set forth in our ruling on the Intervenor's original requests for hearing and proposed contentions. LBP-04-28, 60 NRC 548. For the reasons explained below, we conclude that NEC's proposed new contention meets these requirements and is admissible.

While not referring to 10 C.F.R. § 2.309(f)(1)(i) directly, NEC has satisfied the first requirement by providing a ''specific statement of the issue of law or fact to be raised or controverted.'' NEC's proposed contention challenges Entergy's

[22] NRC Staff suggests that NEC has failed to address subsection (v); however, we find that, while not specifically referencing the subsection, NEC's discussion sufficiently addressed the requirement. *See* NEC Request at 16.

proposed EPU license amendment and its ABS Report, alleging that they fail to comply with Commission regulations (10 C.F.R. Part 50, Appendix S, para. I(a), and/or 10 C.F.R. Part 100, Appendix A) because of a failure to provide adequate analysis to demonstrate that the ACS, under uprate conditions, will be able to withstand the effects of an earthquake and other natural phenomena without losing its safety capabilities. NEC Request at 1. NEC provides four bases and various supporting evidence, including seven specific examples from the Declaration of Dr. Landsman identifying specific deficiencies in the ABS Report, *id.* at 2-6, and these define the basic scope of the proposed contention.

Next, we consider whether NEC provided a ''brief explanation of the basis for the contention.'' 10 C.F.R. § 2.309(f)(1)(ii). The NRC Staff suggests that of NEC's four listed bases, three are ''merely restatements of the contention.'' Staff Answer at 8. Similarly, Entergy argues that Bases 2 and 3 fail to expand on the contention by providing nothing more than restatements of regulatory guidelines. Entergy Answer at 14. As for Basis 1 and Basis 4, Entergy finds them to be overlapping and repetitive. *Id.* at 12, 15 n.40.

We agree that the four points raised in NEC's ''Bases'' discussion overlap, but conclude that, considered together and in conjunction with the deficiencies outlined by Dr. Landsman, they constitute a sufficient explanation of the basis or foundation of the contention to satisfy 10 C.F.R. § 2.309(f)(1)(ii). In essence, they form a syllogism. Point one says that the relevant regulation requires that ''structures, systems and components important to safety must be able to withstand the effects of natural phenomena, such as earthquakes'' and that Entergy has not provided adequate, accurate, and complete analyses making such a showing. Point two asserts that the ACS is a structure, system, or component important to safety. Point three argues that the regulations require the applicant to provide supporting information that is ''complete and accurate in all material respects'' and that this applies to the ACS. Point four is that the ABS Report does not satisfy the foregoing criteria. We do not see the four points as independent bases. Instead, we read them together as one brief and satisfactory explanation of the basic rationale for the contention.

We next turn to 10 C.F.R. § 2.309(f)(1)(iii) and (iv), which require that a proposed contention be within the scope of the proceeding and that it raise an issue material to the findings that the NRC must make if it were to approve the proposed EPU. NEC points out that the Board has already ruled that the subject matter of its new contention meets these criteria. NEC Request at 17. We agree. Our admission of NEC's original Contention 4 made clear that a challenge to the omission or adequacy of a seismic/structural analysis of the ACS for increased loads is both within the scope of this proceeding and material to the findings the NRC must make to support the action. LBP-04-28, 60 NRC at 573. NEC's new Contention 4 — focusing on the alleged failure of Entergy to adequately demonstrate that the ACS will satisfy the appropriate seismic requirements under

EPU operating conditions because the ABS Report does not consider or document the necessary factors or inputs that are listed by Dr. Landsman, NEC Request at 5-6, Landsman Declaration ¶ 7 — is within the scope of this proceeding.

The Staff agrees that the proposed contention is within the scope of the proceeding, but warns that it can be read as not merely a permissible challenge to the ACS's ''operation under extended power uprate conditions,'' but also as a purportedly impermissible challenge to the ''current physical condition of the ACS.'' Staff Answer at 8. We recognize that a contention challenging the current physical condition of the ACS without respect to its performance at uprate conditions would be outside the scope of this proceeding. However, we read NEC's contention as focusing on the ability of the ACS (as it currently exists or as it may be modified) to meet safety requirements during operation at the requested increased power level. As we have previously noted, ''[e]ven if the Entergy application proposes no modification of the cooling towers and related systems, it is relevant to ask whether the unchanged structures and systems are adequate to handle the uprate.'' LBP-04-28, 60 NRC at 573. NEC's new Contention 4 meets this criterion because it states, in pertinent part, ''ENVY must be able to demonstrate that the actual structures, systems and components comprising the ACS will perform satisfactorily in service *at the requested increased power plant level.*'' NEC Request at 1 (emphasis added).

Next, the regulations specify that a contention must provide a ''concise statement of alleged facts or expert opinions which support the requestor's . . . position.'' 10 C.F.R. § 2.309(f)(1)(v). NEC has certainly met this criterion. NEC has provided nine pages of relatively specific factual allegations raising concerns about the ability of the ACS to perform under uprate conditions, NEC Request at 4-13, and a declaration from Dr. Ross Landsman supporting these points, and opining that the ABS Report is deficient. While Entergy disputes the merits of these allegations, the resolution of the merits is for another day. For now, we conclude that the proposed contention satisfies this section of the regulation.

Finally, 10 C.F.R. § 2.309(f)(1)(vi) requires that the requestor provide ''sufficient information to show that a genuine dispute exists . . . on a material issue of law or fact.'' Entergy argues that NEC's allegations are impermissibly broad and vague and do not satisfy this regulation. Entergy Answer at 10. Entergy also avers that NEC has failed to ''identify which analyses are inadequate, inaccurate, or incomplete'' with the necessary specificity. *Id.* As noted above, NEC raises and discusses seven alleged deficiencies in the ABS Report. NEC Request at 5-13. Entergy urges that these are merely allegations of ''non-existent'' ''errors of omission,'' Entergy Answer at 15, and proceeds to address and attempt to rebut each one. *Id.* at 15-30. For example, in response to NEC's allegation that the ABS failed to conduct a physical examination of the ACS and to collect and use field data to see how the actual structures would fare under uprated loads, NEC Request at 6, Landsman Declaration ¶¶ 7, 8, Entergy asserts that ABS conducted a

''walk-through inspection'' of each cell and ''verified that the modeling assumptions were reasonable.'' Entergy Answer at 17.[23] Similarly, in response to NEC's allegation that the ABS Report does not include ''additional conservatisms to account for the effects of aging and/or moisture and/or cooling system chemicals and/or biotic action'' on the ACS, NEC Request at 5, Entergy states that ABS used the Cooling Tower Institute's (CTI's) ''Standard Specifications for the Design of Cooling Towers with Douglas Fir Lumber.'' Entergy Answer at 20.

Entergy's responses go to the merits and only confirm that there are genuine disputes on these material issues of fact and law. For example, it is not clear whether the ABS Report documents the walk-through inspections that Entergy states were performed, or whether they constitute a physical inspection sufficient to address the alleged deficiency. Did ABS obtain and rely upon ''field data?'' If so, was it mentioned in the ABS Report? If not, is it unnecessary? Does the use of CTI's standard adequately encompass and rebut the various factors that NEC alleges are deficient? These are disputed issues. NEC is not required, at this juncture, to prove its case, ''but simply provide sufficient alleged factual or legal bases to support the contention.'' *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-35, 60 NRC 619, 622-23 (2004). We find that NEC has provided sufficient information to demonstrate that an actual dispute exists and thus that 10 C.F.R. § 2.309(f)(1)(vi) is satisfied.

IV. SELECTION OF HEARING PROCEDURES

As charged by 10 C.F.R. § 2.310(a), upon admission of a contention, the Board must identify the specific hearing procedures to be used. The Board makes this determination on a contention-by-contention basis, selecting the hearing procedure ''most appropriate for the specific contentions before it.'' LBP-04-31, 60 NRC 686, 705 (2004). The regulation provides, ''[e]xcept as determined through the application of paragraphs (b) through (h) of this section, proceedings . . . may be conducted under the procedures of subpart L of this part.'' 10 C.F.R. § 2.310(a). Paragraphs (b) through (h) outline specific instances where certain hearing procedures are available or mandated. None of the parties have addressed the question of which hearing procedures should apply to NEC new Contention 4 or whether paragraphs (b) through (h) apply to it. In this circumstance, we conclude that neither the procedures of Subpart L nor Subpart G are mandated. Accordingly, we must select the most appropriate course. In our December 16, 2004 ruling, we determined that the Subpart L procedures were appropriate for

[23] *See* Declaration of Paul D. Baughman (Oct. 17, 2005), ¶ 10.

the then-admitted contentions, and for similar reasons we find that the proceeding on new Contention 4 should be held under Subpart L.[24]

V. CONCLUSION

For the foregoing reasons, we find that New England Coalition's new contention, as modified and set forth in Attachment A hereto, satisfies the requirements of 10 C.F.R. § 2.309(c), (f)(1), and (f)(2), and is admitted.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD[25]

Alex S. Karlin, Chairman
ADMINISTRATIVE JUDGE

Dr. Anthony J. Baratta
ADMINISTRATIVE JUDGE

Lester S. Rubenstein
ADMINISTRATIVE JUDGE

Rockville, Maryland
December 2, 2005

[24] *See* LBP-04-31, 60 NRC at 706.

[25] Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for (1) Licensees Entergy Nuclear Vermont Yankee, L.L.C., and Entergy Nuclear Operations, Inc.; (2) Intervenors Vermont Department of Public Service and New England Coalition of Brattleboro, Vermont; and (3) the Staff.

ATTACHMENT A

New England Coalition New Contention 4 (Modified)

The Entergy Vermont Yankee [ENVY] license application (including all supplements) for an extended power uprate of 20% over rated capacity is not in conformance with the plant specific original licensing basis and/or 10 CFR Part 50, Appendix S, paragraph I(a), and/or 10 CFR Part 100, Appendix A, because it does not provide analyses that are adequate, accurate, and complete in all material respects to demonstrate that the Vermont Yankee Nuclear Power Station Alternate Cooling System [ACS] in its entirety, in its actual physical condition (or in the actual physical condition ENVY will effectuate prior to commencing operation at EPU), will be able to withstand the effects of an earthquake and other natural phenomena without loss of capability to perform its safety functions in service at the requested increased plant power level.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Alex S. Karlin, Chairman
Dr. Anthony J. Baratta
Lester S. Rubenstein

In the Matter of **Docket No. 50-271-OLA**
(ASLBP No. 04-832-02-OLA)

ENTERGY NUCLEAR VERMONT YANKEE, LLC, and ENTERGY NUCLEAR OPERATIONS, INC.
(Vermont Yankee Nuclear Power Station)

December 21, 2005

The two motions by the Department of Public Service of the State of Vermont to compel the production of twenty-eight documents claimed by the NRC Staff to be protected by the deliberative process privilege are denied because the documents meet the three criteria for the deliberative process privilege and the State has not shown a need for the documents that overrides the privilege.

RULES OF PRACTICE: MOTIONS; TIMELINESS

The listing of a document on a privilege log is the ''occurrence or circumstance'' that triggers the 10-day period of 10 C.F.R. § 2.323(a) for the filing of a motion challenging the asserted privilege.

RULES OF PRACTICE: MOTIONS; TIMELINESS AND DUTY TO CONSULT

The requirement of 10 C.F.R. § 2.323(b) that motions be accompanied by a certification that the moving party has made a sincere effort to contact the other parties and resolve the issues does not extend the 10-day period for the filing of motions under 10 C.F.R. § 2.323(a) and the parties cannot, without approval of the Board, agree to extend or waive the 10-day rule.

RULES OF PRACTICE: DISCOVERY; SUFFICIENCY OF PRIVILEGE LOG

The requirement of 10 C.F.R. § 2.336(b)(5) that the privilege claimant provide, without further order or request, ''sufficient information for assessing the claim of privilege,'' is closely related to the 10-day requirement of 10 C.F.R. § 2.323(a), because if the privilege log lacks sufficient information, the 10 days will be consumed by requesting basic substantiation of the privilege claim, rather than resolving the dispute.

RULES OF PRACTICE: DISCOVERY; SUFFICIENCY OF PRIVILEGE LOG

Listing a document on a privilege log, identifying its date, author, addressee, and subject matter, and labeling it as ''deliberative process privileged'' does not provide ''sufficient information for assessing the claim of privilege'' as required by 10 C.F.R. § 2.336(b)(5).

RULES OF PRACTICE: DISCOVERY; MANDATORY DISCLOSURES UNDER SUBPART L

An inadequate privilege log is particularly problematic in Subpart L proceedings, where no other discovery is allowed, because if the privilege log lacks sufficient information as to what purportedly makes the document privileged, the party filing the motion to compel is forced to shoot in the dark and face a substantive answer by the privilege claimant, without the right to reply.

RULES OF PRACTICE: DISCOVERY; MANDATORY DISCLOSURES IN SUBPART L PROCEEDINGS

In Subpart L proceedings, the NRC Staff is subject to two separate mandatory disclosure obligations. First, 10 C.F.R. § 2.1203 requires the Staff to file and

update the hearing file. Second, 10 C.F.R. § 2.336(b) requires the Staff to disclose and/or provide certain additional documents.

RULES OF PRACTICE: DISCOVERY; MANDATORY DISCLOSURES BY STAFF

The Staff's disclosure obligations under 10 C.F.R. § 2.336(b) are not limited to documents that are relevant to the admitted contentions and thus are broader than the disclosure obligations of other parties under 10 C.F.R. § 2.336(a).

RULES OF PRACTICE: DISCOVERY; MANDATORY DISCLOSURES BY STAFF

The Staff's full compliance with the two mandatory disclosure requirements of 10 C.F.R §§ 2.1203 and 2.336(b) are the foundation of the fairness and integrity of Subpart L proceedings, because no other discovery from the Staff is allowed in such proceedings.

RULES OF PRACTICE: DISCOVERY; DELIBERATIVE PROCESS PRIVILEGE

The deliberative process privilege requires that the information be both predecisional and deliberative.

RULES OF PRACTICE: DISCOVERY; DELIBERATIVE PROCESS PRIVILEGE

The deliberative process privilege is qualified and not absolute. The government agency claiming the privilege has the initial burden of showing (not merely asserting) that the document qualifies for the privilege, and then the litigant seeking the document can overcome the privilege by showing that it has an overriding need for the document.

RULES OF PRACTICE: DISCOVERY; DELIBERATIVE PROCESS PRIVILEGE; DELIBERATIVENESS

Internal communications between Staff members about the adequacy of a license application, the potential need to request additional information, and evaluating the adequacy of responses to RAIs, are a legitimate part of the thought processes and deliberations by the Staff and can qualify as ''deliberative'' under the deliberative process privilege.

RULES OF PRACTICE: DISCOVERY; DELIBERATIVE PROCESS PRIVILEGE

Lower-level deliberations are not, *per se,* not ''deliberative.'' Deliberations need not involve a high-level NRC official in order to qualify for the deliberative process privilege. However, the level of the deliberations may be a factor in assessing the extent of the chill that disclosure of the document might cause and in balancing this consideration against the movant's need for the documents.

RULES OF PRACTICE: DISCOVERY; DELIBERATIVE PROCESS PRIVILEGE

The deliberative process privilege is not to be lightly invoked by NRC. Accordingly, the NRC Staff's decision to claim, assert, or invoke the deliberative process privilege over a document must be made by a person, such as the head of the relevant department or division, who has both the expertise and an overview-type perspective to balance the NRC's general duty of disclosure versus its need to conduct frank internal debate without the chilling effect of public scrutiny.

RULES OF PRACTICE: DISCOVERY; DELIBERATIVE PROCESS PRIVILEGE

The decision to assert the deliberative process privilege is not merely a technical determination as to whether a document is predecisional and deliberative, but involves a discretionary balancing of the agency's competing interests and duties by a person who is above the fray of the immediate dispute or litigation.

RULES OF PRACTICE: DISCOVERY; DELIBERATIVE PROCESS PRIVILEGE

The decision of the NRC project engineer and the litigating Staff counsel to assert the deliberative process privilege did not comply with the requirement that it be asserted by the head of the relevant department or division, who has both expertise and an overview-type perspective, and who is above the fray of the litigation.

RULES OF PRACTICE: DISCOVERY; DELIBERATIVE PROCESS PRIVILEGE

In this proposed license amendment proceeding, it was sufficient, for purposes of the deliberative process privilege, that the NRC's decision to assert or invoke the privilege for each document was made by the Director of the relevant Division

of Licensing and Project Management within the NRC Office of Nuclear Reactor Regulation.

RULES OF PRACTICE: DISCOVERY; DELIBERATIVE PROCESS PRIVILEGE

The NRC's decision to withhold an otherwise discoverable document from disclosure under 10 C.F.R. § 2.336(b) and instead list it on a privilege log is the instant in which the deliberative process privilege is asserted or invoked, and that determination must be made by a senior person or department head who has reviewed the document. The senior person must review the document and make the decision whether to assert the privilege before the document is withheld.

RULES OF PRACTICE: DISCOVERY; DELIBERATIVE PROCESS PRIVILEGE

The deliberative process privilege is a qualified privilege and may be overridden if the moving party shows sufficient need. Relevance alone may not suffice to show such a need.

MEMORANDUM AND ORDER
(Ruling on Deliberative Process Privilege Claims)

Before the Board are two motions by the Vermont Department of Public Service (State) seeking to compel the production of a total of twenty-eight documents that the NRC Staff (Staff) withheld from the mandatory disclosure required by 10 C.F.R. § 2.336(b).[1] The Staff claims that the documents are protected by the deliberative process privilege.[2] For the reasons stated below, the Board concludes that these documents qualify for the deliberative process privilege, and that the State has not shown a need for the documents that overrides the privilege. Accordingly, the State's first two motions to compel are denied.[3]

---

[1] Vermont Department of Public Service Motion To Compel Production of Certain NRC Staff Documents (Aug. 31, 2005) (seeking production of three Staff documents) [State Motion I]; Vermont Department of Public Service Motion To Compel Production of Certain NRC Staff Documents (II) (Sept. 29, 2005) (seeking production of twenty-five Staff documents) [State Motion II].

[2] NRC Staff's Answer to Vermont Department of Public Service's Motion To Compel (Sept. 12, 2005) [Staff Answer I]; NRC Staff's Answer to Vermont Department of Public Service's Second Motion To Compel (Oct. 21, 2005) [Staff Answer II].

[3] The State has filed a third motion to compel that is not addressed here. *See* Vermont Department of Public Service Motion To Compel Production of Certain NRC Staff Documents (III) (Nov. 22, 2005) *(Continued)*

I. BACKGROUND

A. Procedural Posture

In November 2004, this Board granted the requests of the State and the New England Coalition (NEC) to hold a hearing concerning the Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (collectively, Entergy) application for an extended power uprate (EPU) for the Vermont Yankee Nuclear Power Station in Windham County, Vermont. LBP-04-28, 60 NRC 548 (2004). We admitted two NEC contentions. At that point, the Staff made certain documents available to the parties, as required by 10 C.F.R. § 2.336(b). The Staff also withheld certain documents, which it asserted were privileged or protected, and, in lieu thereof, provided lists of these ''otherwise discoverable documents,'' including a deliberative process privilege log, as required by 10 C.F.R. § 2.336(b)(5).[4] The Staff has regularly updated its disclosures and privilege logs.[5]

On August 31, 2005, the State moved to compel the Staff to produce three documents that were listed in the Staff's July 27, 2005 deliberative process privilege log. State Motion I at 4-5. In its answer, the Staff maintained that the documents qualified for the privilege. Staff Answer I at 5-7. On September 29, 2005, the State filed a second motion, seeking an additional twenty-five documents that the Staff listed in its September 6, 2005 deliberative process privilege log. State Motion II at 1 & Tab C. Meanwhile, on September 30, 2005, the Board, concerned about a potentially serious deficiency in the Staff's privilege claim, asked the Staff to provide certain supplemental information (i.e., the identity of the official who made the decision to withhold the documents) and to submit a supplemental brief.[6] Specifically, we noted that in the only two reported cases on point, the Licensing Boards had required that the deliberative

---

(challenging the Staff's deliberative process privilege claims for certain documents on the Staff's September 29, 2005 and October 31, 2005 privilege logs) [State Motion III].

[4] The Board accepted the parties' agreement to waive the privilege log requirement for documents covered by the attorney-client communication privilege or the attorney work product privilege. Licensing Board Initial Scheduling Order (Feb. 1, 2005) at 2 n.1 (unpublished).

[5] Under 10 C.F.R. § 2.336(d), the Staff and the parties have a continuing duty to supplement the initial mandatory disclosures every 14 days. The Board, however, granted Entergy's unopposed motion to modify the update period to 30 days until the draft Safety Evaluation Report (SER) was issued. *See* Licensing Board Order (Granting Motion To Change Discovery Update Period) (Feb. 14, 2005) (unpublished).

[6] Licensing Board Order (Regarding State of Vermont's Motion of Aug. 31, 2005) (Sept. 30, 2005) (unpublished) [September 30, 2005 Order].

process privilege be asserted by the head of the agency,[7] and we expressed concern as to how this requirement applied to NRC Staff. The State was permitted to file a responsive brief on this issue. Our September 30, 2005 Order also instructed the Staff to submit copies of the three documents covered by State Motion I for our *in camera* review.[8]

On October 21, 2005, the Staff submitted its answers and brief in response to the Board's order,[9] the three documents for *in camera* review, and its answer to State Motion II. Included with the Staff's response was the affidavit of Ledyard B. Marsh, the Director of the Division of Licensing and Project Management (DLPM) within the NRC Office of Nuclear Reactor Regulation (NRR) (Division Director).[10] The State then submitted its responsive brief.[11]

B. Position of Parties

The State makes three main arguments in support of its motions to compel.[12] First, the State argues that the documents at issue are relevant to the admitted contentions and are related to Entergy's application, and thus must be disclosed under 10 C.F.R. § 2.336(b). State Motion I at 6-7. Second, the State asserts the documents are not protected by the deliberative process privilege because they

---

[7] *See Kerr-McGee Chemical Corp.* (West Chicago Rare Earths Facility), LBP-85-38, 22 NRC 604, 627 (1985) (requiring an affidavit from the head of the relevant agency of the State of Illinois when claiming privilege for documents explaining the development of policies that would apply to Kerr-McGee); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), LBP-83-72, 18 NRC 1221, 1223 (1983) (requiring an affidavit from the head of the Federal Emergency Management Agency when claiming privilege for draft memoranda and letters from Agency officials to the NRC, and for briefing papers, status reports, and analyses).

[8] Earlier, the State had requested oral argument on the motion or, alternatively, the opportunity to file a request for leave to file a reply brief. Vermont Department of Public Service Request for Oral Argument or, Alternatively, for Leave To File a Request To File a Reply Brief (Sept. 15, 2005). The Staff opposed that motion. NRC Staff's Answer to Vermont Department of Public Service Request for Oral Argument or, Alternatively, for Leave To File a Request To File a Reply Brief (Sept. 21, 2005). On September 29, 2005, the State filed another motion for leave to file a reply brief. Vermont Department of Public Service Motion for Leave To File a Reply Brief in Support of its Motion To Compel (Sept. 29, 2005). The Board's September 30, 2005 Order held these motions for oral argument in abeyance.

[9] NRC Staff Response to the Atomic Safety and Licensing Board's Order of September 30, 2005, Regarding Vermont Department of Public Service's First Motion To Compel (Oct. 21, 2005) [Staff Response].

[10] Staff Response, Affidavit of Ledyard (Tad) B. Marsh (Oct. 20, 2005) [Marsh Aff.].

[11] Vermont Department of Public Service Answer to NRC Staff Response to the Atomic Safety and Licensing Board's Order of September 30, 2005, Regarding Vermont Department of Public Service's First Motion To Compel (Oct. 28, 2005) [State Answer to Staff Response].

[12] In its second motion the State incorporates by reference the arguments in its first motion. State Motion II at 2-3.

do not contain ''preliminary opinions'' and thus are not deliberative, but instead merely deal with ''preliminary inquiries'' and the ''information gathering process which precedes decision-making.'' *Id.* at 7-9. Third, the State claims that, even if the Staff has met its burden in establishing that these documents qualify for the deliberative process privilege, the documents still must be disclosed because the State's need for the information outweighs the Staff's need to protect the documents from disclosure. *Id.* at 10-11.

The Staff argues that the documents the State seeks were properly withheld under the deliberative process privilege because they contain the thought processes, views, and opinions of individual Staff members. Staff Answer I at 5-7. Specifically, two of the documents requested in the State Motion I, ML051940095 and ML051990237, ''are e-mails wherein members of the staff are exchanging questions and views regarding the nature and scope of the Staff's review of Entergy's station black out (SBO) coping strategy,'' conveying discussions ''between members of the Staff regarding the scope of the review to be undertaken.'' *Id.* at 6. The Staff claims that the third document, ML052060072, is more substantive because it is ''an e-mail between members of the Staff that express [*sic*] one Staff member's opinion on a matter that has not been decided, and proposes one alternative course of action and asks for further deliberation.'' *Id.*

In explaining why the twenty-five documents that are the subject of State Motion II are privileged, the Staff asserts that the documents are all deliberative, falling into one or more of the following five categories:

> Category 1: ''Contains draft requests for information'' or ''draft requests for additional information'';
>
> Category 2: ''Contains draft requests for . . . clarification of terms in previous responses to RAIs'';
>
> Category 3: ''Contains staff recommendations to changes to request for additional information'';
>
> Category 4: ''Contains staff discussion of responses to requests for additional information''; and
>
> Category 5: ''Contains staff recommendations regarding internal procedures for following up responses to requests for additional information.''

Staff Answer II at 4-5. The Staff also argues that the State has failed to demonstrate an overriding need that would require disclosure of documents protected by the deliberative process privilege because the withheld documents do not relate to the State's admitted contentions. Staff Answer I at 7-10; Staff Answer II at 8-9.

In its answers to the Board's September 30, 2005 Order, the Staff indicates that the only people who reviewed the three documents that are the subject of State Motion I *before* they were withheld and placed on the Staff's July 27, 2005

privilege log were a project engineer on this matter, Mr. G. Edward Miller, and the Staff counsel then assigned to this proceeding, Ms. Brooke Poole. Staff Response at 4. Mr. Miller made the initial determination and Ms. Poole concurred. *Id.* According to the Staff, *subsequent* to the Board's September 30, 2005 inquiry on this point, the DLPM Division Director personally reviewed all of the documents at issue and affirmed Mr. Miller's determination that the documents should be withheld based on a claim of the deliberative process privilege. *Id.* at 4-5.

The Staff asserts that the requirement that a high-level agency official invoke the deliberative process privilege claim ''do[es] not apply to the Staff's assertion of privilege when it compiles or updates a hearing file.'' *Id.* at 7. According to the Staff, ''there is no reason why the formal invocation process established under federal caselaw should be applied'' when the Staff makes the ''initial determination'' to assert the deliberative process privilege, arguing that this ''would cause an excessive and unnecessary burden on the agency.'' *Id.* at 7-8. If the Board were to find such a procedure necessary, the Staff maintains that the Division Director's affidavit, which was included with the Staff's response to the Board's questions, satisfied any '' 'invocation' requirements.'' *Id.* at 10-11.

The State does not dispute that the Division Director is of sufficiently high rank to invoke the deliberative process privilege, but claims that the fact that he saw the documents only to decide whether to withhold them as deliberative, and not as a participant in the purported deliberations, demonstrates that the documents are not protected by the deliberative process privilege. State Answer to Staff Response at 2-3.

As a related matter, the briefing on the two motions reveals a procedural issue that the Board must address, i.e., the relationship between the requirement that motions be filed within 10 days of the occurrence from which the motion arises and the requirement that motions be accompanied by a certification that the movant has made a sincere effort to contact and consult the other party before filing the motion. *See* 10 C.F.R. § 2.323(a)-(b). The question presented is whether the parties can, without leave of the Board, waive the 10-day deadline in order to give themselves more time to perform the required consultation. The Staff first asserted the privilege on July 27, 2005, when it placed the documents on its deliberative process privilege log. State Motion I was filed more than 10 days later, on August 31, 2005.[13] The State explained that the Staff had agreed that if the State raised objections to the privilege logs within 10 days of its production, and then filed a motion to compel within 5 days of the Staff's written response to the State's objection, the Staff would not raise the issue of the timeliness of the motion to compel. State Motion I at 2. The Staff has complied with this

[13] The same process and delay occurred with regard to State Motion II.

agreement and has not objected to the timeliness of either of the State's motions. Nonetheless, the appropriateness of this procedure needs to be addressed.

II. ANALYSIS

A. Timeliness

We turn first to the procedural issue concerning the ability of the parties to waive, without leave of the Board, the requirement that a motion be filed ''no later than ten (10) days after the occurrence or circumstance from which the motion arises.'' 10 C.F.R. § 2.323(a). Specifically, we address the relationship of the 10-day requirement to the next subsection of the regulation, which states:

> A motion must be rejected if it does not include a certification by the attorney or representative of the moving party that the movant has made a sincere effort to contact other parties in the proceeding and resolve the issue(s) raised in the motion, and that the movant's efforts to resolve the issue(s) have been unsuccessful.

10 C.F.R. § 2.323(b). The second subsection is referred to as the ''consultation'' requirement.[14] Both requirements were added when the Commission amended the Part 2 procedural rules in 2004.[15] Each requirement has laudable goals. The first promotes the expeditious raising and resolution of issues. The second seeks to avoid unnecessary litigation by requiring the movant to make a reasonable effort to discuss and perhaps resolve the problem or misunderstanding before involving the Board.

It is our determination that the listing of a document on a privilege log is the ''occurrence or circumstance'' that triggers the 10-day period of 10 C.F.R. § 2.323(a) for the filing of a motion challenging the asserted privilege. The moment the document is withheld and the privilege log is served on the other parties is the moment when the privilege is asserted and opposing parties must study the log and decide whether to challenge it.[16]

---

[14] Although we refer to 10 C.F.R. § 2.323(b) as the consultation requirement, we recognize that it merely requires a sincere effort to contact the other party and resolve the issue.

[15] *Compare* 10 C.F.R. § 2.323 *with* 10 C.F.R. § 2.730 (2004). *See also Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-12, 59 NRC 237, 239 n.3 (2004) (noting that the old rules did not contain a 10-day deadline for filing motions).

[16] The suggestion that the 10-day deadline is not triggered until after the consultation is complete or at an impasse puts the cart before the horse. Consultation is necessarily a subsequent event, because consultation is only required if *first* there is an event or circumstance that causes a problem and raises the need to file a motion. The objectionable event must necessarily precede any duty to consult about settling it.

We also hold that the consultation requirement of 10 C.F.R. § 2.323(b) does not extend the 10-day filing requirement of 10 C.F.R. § 2.323(a) and that the parties cannot, without approval of the Board, agree to waive the 10-day rule applicable to the filing of motions. The Board is responsible for managing the adjudicatory proceeding in a fair and expeditious manner, and our ability to do so could be undermined significantly if the parties could simply discard or extend the regulatorily prescribed deadlines for the filing of motions and bring disputed matters to the Board at some late date in a proceeding.[17]

We recognize that the 10-day deadline for filing motions to compel, if mechanically applied, could be unfair and counterproductive. Within the 10-day window a party must: (a) identify the occurrence or circumstance provoking the motion (e.g., promptly read the privilege logs); (b) make a sincere effort to consult the opposing party and resolve the matter; and (c) research, draft, and file its motion (its only pleading and brief on the matter, given that the movant has no right to reply). *See* 10 C.F.R. § 2.323(a)-(c). Obviously, any consultation needs to be prompt, and the opposing party needs to cooperate. Likewise, it may prove difficult, if not impossible, to consult and resolve issues within the 10-day window, if the privilege logs lack ''sufficient information'' and the 10 days is consumed by explaining or supplementing them. Accordingly, if the parties believe that additional time for consultation may be productive, either on a specific dispute or more generally, they are encouraged to advise the Board and move for the enlargement of the 10-day time frame of 10 C.F.R. § 2.323(a).

Applying these principles here, we find that the listing of the three documents on the Staff's July 27, 2005 privilege log was the ''occurrence or circumstance'' that triggered the 10-day requirement of 10 C.F.R. § 2.323(a). When the Staff withheld a document from the mandatory disclosure and instead put it on the list of ''documents for which a claim of privilege or protected status is being made,'' 10 C.F.R. § 2.336(b)(5), the Staff was invoking the deliberative process privilege. However, the State did not file its motion challenging the asserted privilege until August 31, 2005.

Several circumstances incline us to excuse the delay in this case. First, the relevant regulations were new and untested. Second, the State relied on the

[17] For example, in this case the State and the Staff apparently had an agreement whereby the State was obliged to register its informal objection with the Staff within 10 days of the issuance of the privilege log, the Staff would respond in writing, and the State, if not satisfied, was to file its motion to compel within 5 days after the Staff's written response. State Motion I at 2. This agreement gave the Staff an indefinite amount of time to issue its written response, thus allowing an indefinitely long amount of time for the filing of motions. Recently, the Staff took more than 35 days to file such a written response. *See* State Motion III at 2. Even if the parties had agreed to a specific time frame for such responses, if extension of regulatory deadlines by agreement of the parties is acceptable in principle, there would be nothing to constrain them against agreeing to long (e.g., 90-day) time frames, delaying resolution of issues and adversely affecting the Board's management of the case.

interpretation of the NRC Staff itself, which initially agreed not to raise the untimeliness defense under these circumstances.[18] Third, in some instances the Staff's deliberative process privilege logs did not provide ''sufficient information for assessing the claim of privilege'' as required by 10 C.F.R. § 2.336(b)(5), and the absence of this information made it difficult, if not impossible, for an opposing party to assess the validity of the privilege claim without additional information. The logs provided, *inter alia,* the name and affiliation of the author and addressee, and the title/description of the document. For example, ML051940095 is described as ''E-mail — Reddy NRR to Gill, NRR, re: VY EPU SBO Review.'' State Motion I at 5. This identifies the document as an intra-NRR e-mail on the subject of the station blackout review, but does not provide ''sufficient information'' to assess, even superficially, whether the Staff's claim of deliberative process privilege is valid, i.e., information that helps one determine whether it is predecisional and contains ''deliberations.'' The fact that the Staff puts a document on a privilege log, and thus labels a document as ''deliberative,'' is not sufficient information to assess whether it is.

We recognize that litigants often mutually tolerate privilege logs that merely identify documents claimed to be privileged, and, absent objections, the Board is not involved. We also recognize that the agreement of the parties here, apparently tolerating some of the skimpy privilege logs and allowing the party claiming the privilege to supplement the privilege log information at some later time and attempt to substantiate the privilege, is not an atypical approach.[19] No single method or model for privilege logs satisfies all situations, and the supplementation dialogue engaged in by the parties here may be a good use of the consultation process. But such supplementation does not convert a privilege log that lacks ''sufficient information'' for assessing the validity of a claimed privilege into one that does. An inadequate privilege log is particularly problematic in Subpart L proceedings, where no other discovery is allowed, because without ''sufficient information'' as to what allegedly makes the document ''deliberative,'' the

[18] *See* State Motion I, Tab A, Letter from Anthony Z. Roisman, National Legal Scholars Law Firm, P.C., to Brooke Poole, Counsel for NRC Staff (July 20, 2005); E-mail from Brooke Poole, Counsel for NRC Staff, to Anthony Roisman, National Legal Scholars Law Firm, P.C. (July 21, 2005).

[19] Until State Motion I, the Staff's deliberative process privilege logs contained little or no information in the ''comments'' field and essentially just identified the documents in question. Since that time, the Staff has generally completed the comments field by providing some information that helps explain or substantiate how or why the document is deliberative. *Compare* State Motion I at 5 (providing an excerpt of the Staff's deliberative process privilege logs of July 27, 2005), *with* State Motion III, Tab C (providing the Staff's deliberative process privilege logs of September 29, 2005).

challenger is forced to shoot in the dark and face a substantive answer by the document withholder, without the right to reply.[20]

Given the agreement of the Staff and the newness of the regulations, we will not rule the State's motions untimely. However, if the parties wish to continue this approach and to permit more than the 10 days allotted by 10 C.F.R. § 2.323(a), they must submit a proposed order to extend the time allowed for motions to compel.

B. Scope of Staff Disclosure Obligations Under 10 C.F.R. § 2.336(b)(3)

The State has argued that the documents in dispute must be produced, even if they are not relevant to the contentions, because 10 C.F.R. § 2.336(b) requires the Staff to disclose all documents related to Entergy's application. State Motion I at 6-7. We agree that the Staff's disclosure obligations under 10 C.F.R. § 2.336(b) are broader than the subject matter of the admitted contentions. Under 10 C.F.R. § 2.336(b)(3) the Staff must provide ''[a]ll documents (including documents that provide support for, or opposition to, the application or proposed action) supporting the NRC staff's review of the application or proposed action that is the subject of the proceeding.'' This broad language contrasts with 10 C.F.R. § 2.336(a)(2), which only requires that parties (other than the Staff) disclose documents that are ''relevant to the contentions.'' The Commission recognized this distinction and understood that the broader language obligated the Staff to disclose documents that are beyond the scope of the contentions.[21] Accordingly, the Staff is obliged by 10 C.F.R. § 2.336(b)(3) to produce and disclose all documents that provide support for, or opposition to, the application or proposed action, supporting the Staff's review of Entergy's EPU application.[22]

---

[20] If a privilege log lacks sufficient information, then it increases the chance that the moving party ''could not reasonably have anticipated'' the privilege claimant's arguments and thus should be granted a right to file a reply. *See* 10 C.F.R. § 2.323(c).

[21] The Commission demonstrated it was aware of this distinction when it deleted proposed 10 C.F.R. § 2.336(a)(4), which was to require that parties other than the NRC Staff disclose documents that ''provide direct support for, or opposition to, the application or other proposed action that is the subject of the proceeding.'' 69 Fed. Reg. 2182, 2208 (Jan. 14, 2004). This proposed provision was deleted because it required non-Staff parties to make disclosures that ''extended beyond the scope of the contested issues in the proceeding.'' *Id.* The requirement that the Staff disclose documents, ''(including documents that provide support for, or opposition to, the application or proposed action) supporting the NRC staff's review of the application or proposed action that is the subject of the proceeding,'' remained in the final rule.

[22] The Staff does not appear to dispute this point. The State quotes the Staff's assertion that ''DPS has no need for the memorandum, which does not pertain to DPS's admitted contentions,'' State Motion I at 6, but, in context, that statement does not appear to challenge the Staff's disclosure

(Continued)

C. Withholding of Documents Under the Deliberative Process Privilege

We analyze the Staff's withholding of documents claimed to be protected under the deliberative process privilege in three steps. First, we review the role of mandatory disclosures in Subpart L proceedings. Second, we discuss the requirements that must be met in order to successfully assert a claim of deliberative process privilege and determine whether the Staff has satisfied these requirements. Third, we weigh the State's argument that, even if the documents qualify for the deliberative process privilege, the State has an overriding need for the documents.

1. Importance of Mandatory Disclosure in Subpart L Proceedings

In adjudicatory hearings conducted under 10 C.F.R. Part 2, Subpart L, the general rule is to prohibit all discovery. ''[A] party may not seek discovery from any other party or the NRC or its personnel, whether by document production, deposition, interrogatories or otherwise.'' 10 C.F.R. § 2.1203(d). With regard to the NRC Staff, there are two main exceptions. First, the Staff is obliged to make a hearing file available. ''[T]he NRC staff shall file in the docket, present to the presiding officer, and make available to the parties to the proceeding a hearing file.''[23] 10 C.F.R. § 2.1203(a)(1). Second, as previously discussed, the NRC Staff is required to make documents available to parties as mandatory disclosures pursuant to 10 C.F.R. §§ 2.1203(d) and 2.336(b).[24] The scope of the Staff's duty to make mandatory disclosures is broader than the scope of its duty to provide the hearing file.[25] These required disclosures are the ''foundation'' of the Commission's goals of reducing the ''burden of discovery'' and ''enhanc[ing] the participation of ordinary citizens in the discovery process.'' 69 Fed. Reg. at 2194.

---

obligations under 10 C.F.R. § 2.336(b)(3), but rather appears to address the State's showing of need under the deliberative process privilege balancing. *See* State Motion I, Tab A, Letter from Antonio Fernandez, Counsel for NRC Staff, to Anthony Z. Roisman, Esq., National Legal Scholars Law Firm, P.C. (Aug. 24, 2005). Further, by listing the disputed documents on its privilege logs, the Staff implicitly acknowledged that, but for the assertion of privilege, disclosure would be required.

[23] The hearing file must contain ''the application, if any, and any amendment to the application, and, when available, any NRC environmental impact statement or assessment and any NRC report related to the proposed action, as well as any correspondence between the applicant/licensee and the NRC that is relevant to the proposed action.'' 10 C.F.R. § 2.1203(b).

[24] *See* 69 Fed. Reg. at 2194 (noting that the NRC mandatory disclosure provisions are ''generally modeled on Rule 26 of the Federal Rules of Civil Procedure'' but ''have been tailored to reflect the nature and requirements of NRC proceedings'').

[25] *Compare* 10 C.F.R. § 2.1203(b) (hearing file contents) *with* 10 C.F.R. § 2.336(b)(1)-(5) (mandatory disclosure requirements).

The Staff may withhold an otherwise discoverable document from mandatory disclosure only if it is a document ''for which there is a claim of privilege or protected status.'' 10 C.F.R. § 2.336(b). If the Staff asserts such a privilege or protection, it must, in lieu of providing the document, describe it on a privilege log that provides a ''list of all otherwise-discoverable documents for which a claim of privilege or protected status is being made, together with sufficient information for assessing the claim of privilege or protected status of the documents.'' 10 C.F.R. § 2.336(b)(5). The deliberative process privilege is a privilege that may be asserted in NRC proceedings. *Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), CLI-94-5, 39 NRC 190, 197 (1994). However, the Staff should not withhold a document from disclosure ''in the absence of an NRC determination of a compelling reason for nondisclosure after a balancing of the interests of the person or agency urging nondisclosure and the public interest in disclosure.'' 10 C.F.R. § 2.390(a).

As the hearing file and mandatory disclosure are the sole forms of ''discovery'' imposed on the Staff in Subpart L proceedings, the Staff's full compliance with these obligations is the ''foundation'' of the ability of intervenors to effectively participate in, and in the fairness and integrity of, such proceedings.

2. Deliberative Process Privilege

a. General Requirements

The deliberative process privilege is a subset of the executive privilege,[26] which

[26] Although the terms ''executive privilege'' and ''deliberative process privilege'' are often used interchangeably, *see, e.g., Zenith Radio Corp. v. United States,* 764 F.2d 1577, 1580 (Fed. Cir. 1985) (''executive privilege . . . protects agency officials' deliberations, advisory opinions and recommendations in order to promote frank discussion of legal or policy matters in the decision-making process''), the deliberative process privilege is but one variant of executive privilege, *see, e.g., Grand Central Partnership, Inc. v. Cuomo,* 166 F.3d 473, 481 (2d Cir. 1999) (noting that the '' 'deliberative process privilege,' . . . is encompassed within the executive privilege''); *In re Sealed Case,* 121 F.3d 729, 737 (D.C. Cir. 1997) (noting that ''[t]he most frequent form of executive privilege raised in the judicial arena is the deliberative process privilege''); *Tax Analysts v. IRS,* 117 F.3d 607, 616 (D.C. Cir. 1997) (noting that deliberative process privilege is ''a variant of executive privilege''); *Taxation with Representation Fund v. IRS,* 646 F.2d 666, 676-77 (D.C. Cir. 1981) (noting that deliberative process privilege is ''sometimes called the 'executive' or 'governmental' privilege''). Other forms of executive privilege include the constitutional presidential communications privilege, *see Cheney v. United States District Court,* 542 U.S. 367 (2004); *United States v. Nixon,* 418 U.S. 683 (1974); and the state secrets privilege, *see United States v. Reynolds,* 345 U.S. 1 (1953). Although the substantive elements of each form of the executive privilege differ, the procedural requirements established in *Reynolds* generally apply to all forms of the executive privilege. *See, e.g., National Lawyers Guild v. Attorney General,* 96 F.R.D. 390, 396 n.10 (S.D.N.Y. 1982); *Coastal Corp. v. Duncan,* 86 F.R.D. 514, 517 (D. Del. 1980); *Carl Zeiss Stiftung v. V.E.B. Carl Zeiss, Jena,* 40 F.R.D. 318, 327 n.33 (D.D.C. 1966).

is unique to governmental agencies.[27] The Commission provided an excellent overview of much of the law applicable to the deliberative process privilege in *Vogtle,* CLI-94-5, 39 NRC at 196-98, and we will only recount several of the main points here. As *Vogtle* makes clear, the privilege available in NRC proceedings is closely related to Exemption 5 under the Freedom of Information Act, 5 U.S.C. § 552(b)(5). *Id.* at 197. The deliberative process privilege protects documents ''reflecting advisory opinions, recommendations and deliberations comprising part of a process by which governmental decisions and policies are formulated,'' *National Labor Relations Board v. Sears, Roebuck & Co.,* 421 U.S. 132, 150 (1975) (quoting *Carl Zeiss,* 40 F.R.D. at 324), but does not extend to factual material severable from the deliberative context. *Environmental Protection Agency v. Mink,* 410 U.S. 73, 87-88 (1973). If, however, the factual material is so ''inextricably intertwined'' with the deliberative sections of a document that its disclosure would inevitably reveal agency deliberations, then the factual material need not be disclosed. *Vogtle,* CLI-94-5, 39 NRC at 198.

The deliberative process privilege applies only if the information is (1) predecisional and (2) deliberative. *Id.* at 197 (quoting *Petroleum Information Corp. v. United States Department of the Interior,* 976 F.2d 1429, 1434 (D.C. Cir. 1992)). ''A document is predecisional if it was prepared *before* the adoption of an agency decision and specifically prepared to assist the decisionmaker in arriving at his or her decision.'' *Id.* A document is deliberative if it reflects a ''consultative process.'' *Id.* at 198. This can include ''analysis, evaluations, recommendations, proposals, or suggestions reflecting the opinions of the writer rather than the final policy of the agency.'' *Id.* A document does not need to contain a specific recommendation to be deliberative. *Id.*

The substantial majority of federal cases, and the only two licensing board cases on point, hold that an agency's decision to assert the deliberative process privilege over a document, while not requiring the personal review of the actual head of the agency, must at least be made by a senior person, such as the head of the department having control over the requested information.[28]

---

[27] *Coastal States Gas Corp. v. Department of Energy,* 617 F.2d 854, 866 (D.C. Cir. 1980).

[28] *See, e.g., Landry v. Federal Deposit Insurance Corp.,* 204 F.3d 1125, 1135-36 (D.C. Cir. 2000) (holding that the head of the FDIC's regional division is of sufficient rank to assert the deliberative process privilege); *Northrop Corp. v. McDonnell Douglas Corp.,* 751 F.2d 395, 405 n.11 (D.C. Cir. 1984) (rejecting claim because not claimed by head of department); *Branch v. Phillips Petroleum Co.,* 638 F.2d 873, 882-83 (5th Cir. 1981) (holding the director of the EEOC's district office sufficient); *Kerr v. United States District Court,* 511 F.2d 192, 198 (9th Cir. 1975) (rejecting claim of privilege because not invoked by any official of the agency); *Jade Trading, LLC v. United States,* 65 Fed. Cl. 487, 497 (2005) (requiring the assertion of privilege by the Commissioner of the IRS or the Secretary of the Treasury); *Yankee Atomic Electric Co. v. United States,* 54 Fed. Cl. 306, 311 (2002) (allowing the Secretary of Energy to delegate the authority to claim the privilege to the Chief Operating Officer

(Continued)

> [M]ost courts, with the approval of the writers, have refused to allow the governmental [deliberative process] privileges to be claimed by any governmental attorney. Indeed, some courts have gone so far in following *Reynolds* as to require the agency head to give personal consideration to the claim of privilege, though other courts have been unwilling to take so extreme a position. The justification for requiring the agency head to claim the privilege is that this will discourage the making of frivolous claims for purely tactical reasons.[29]

Most cases allow the delegation of this responsibility by the head of the agency to the head of the relevant department because the privilege is to be asserted only after ''actual personal consideration'' of the document by the person making the decision. *See, e.g., Landry,* 204 F.3d at 1135 (quoting *In re Sealed Case,* 856 F.2d 268, 271 (D.C. Cir. 1988)). However, relatively high-level personal review is still required. Such review is ''designed to deter governmental units from too freely claiming a privilege that is not to be lightly invoked . . . by assuring that someone in a position of high authority could examine the materials involved from a vantage point involving both expertise and an overview-type perspective.'' *Coastal Corp. v. Duncan,* 86 F.R.D. at 517 (quoting *Smith v. Federal Trade Commission,* 403 F. Supp. 1000, 1016 n.48 (D. Del. 1975)).

The deliberative process privilege is qualified and not absolute. *Vogtle,* CLI-94-5, 39 NRC at 198. Thus, although the government agency claiming the privilege has the initial burden of showing that the document qualifies for the privilege, once that burden is met, the litigant seeking the document can overcome the privilege by demonstrating an overriding need for the document. *Id.* In short,

---

of Civilian Radioactive Waste Management within DOE); *Ferrell v. United States Department of Housing and Urban Development,* 177 F.R.D. 425, 428 (N.D. Ill. 1998) (allowing HUD's Assistant Secretary for Housing–Federal Housing Commissioner, whom HUD delegated authority, to assert privilege); *Mobil Oil Corp. v. Department of Energy,* 102 F.R.D. 1, 6 (N.D.N.Y. 1983) (rejecting claim invoked by a DOE staff attorney and not by the agency's head or a ''subordinate with high authority''); *Exxon Corp. v. Department of Energy,* 91 F.R.D. 26, 43-44 (D. Tex. 1981) (finding procedural requirements not met because no affidavit or other statement has been submitted by the Secretary of Energy or other agency official); *Kerr-McGee Chemical Corp.* (West Chicago Rare Earths Facility), LBP-85-38, 22 NRC 604, 627 (1985) (requiring an affidavit from the head of the relevant agency of the State of Illinois); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), LBP-83-72, 18 NRC 1221, 1223 (1983) (requiring an affidavit from the head of the Federal Emergency Management Agency). *But see United States Department of Energy v. Brett,* 659 F.2d 154, 155 (Temp. Emer. Ct. App. 1981) (per curiam) (holding that the deliberative process privilege does not need to be asserted by the head of an agency or even a senior official, but may be ''raised by individuals with specific and detailed knowledge of the documents in which the privilege is asserted''); Fed. R. Evid. 509, 56 F.R.D. 183, 251-52 (1972) (rejected by Congress in 1973) (allowing assertion of the deliberative process privilege, as a ''privilege for official information,'' as low as the level of ''any attorney representing the Government'').

[29] 26A Charles Alan Wright & Kenneth W. Graham, Jr., *Federal Practice and Procedure* § 5693 (1992) (footnotes omitted).

a board may require the Staff to produce a deliberative document if the intervenor shows a sufficient need for it.

Applying these general principles here, we focus on two issues: whether the documents are deliberative, and whether the appropriate person determined that NRC should assert the privilege and withhold them from the mandatory disclosure required by 10 C.F.R. § 2.336(b)(3).

b. The ''Deliberative'' Element

The thrust of the State's assertion that the documents in question are not protected by the deliberative process privilege is that the documents are not deliberative because ''[t]hey do not represent preliminary opinions on the final decision Staff will make on Entergy's EPU application'' but instead are ''more in the nature of factual information — i.e., what facts does [the] Staff believe it needs to see in order to properly evaluate Entergy's proposal — not opinion or predecisional analyses.'' State Motion I at 7. Essentially, the State argues that the documents are ''merely information requests or identifications of potential areas of concern'' and thus, do ''not reveal the decision-making process but only the information gathering process which precedes decision-making.'' *Id.* at 9.

We disagree with the State's position and find that the Staff communications at issue are deliberative. Requests for additional information (RAIs) are a normal part of the NRC application process, and well-drafted and pertinent RAIs help the Staff in probing the right issues and gathering the necessary information to reach its decision on an application. Internal communications between Staff members about the adequacy of the application, the potential need to request additional information, and the Staff's evaluation of the adequacy or inadequacy of the RAI responses (and the possible need for more RAIs) are a legitimate, if not particularly high-level, part of the thought process and deliberations by the Staff. The disclosure of such internal discussions, drafts, and debate could have a chilling effect on the willingness of Staff members to speak up, raise questions, or engage in appropriate professional debate about safety or environmental issues.[30] Of course such communications deal with the gathering of factual information (which, if severable, must be disclosed), but these communications reflect the opinions and evaluations of individual Staff members regarding these areas of inquiry and the sufficiency of these facts. Without deliberative process privilege protection for these communications, Staff members may be reluctant to engage in frank discussions about the quality or completeness of a pending application.

The fact that the Division Director, or other high-level NRC officials, may not have seen these documents in the course of the EPU decisionmaking process is

[30] Final RAIs and the responses thereto are not protected by the deliberative process privilege.

not determinative. *See* State Answer to Staff Response at 3. The requirement that the ''head of a department'' or senior agency official make the agency *decision to assert* the deliberative process privilege does not mean that such higher-level individuals must be involved in the *deliberation* itself, i.e., the analyses, evaluations, recommendations, proposals, or opinions that qualify the document as deliberative. These are separate issues. Here, based both on the affidavit of the Division Director and our *in camera* review of the three documents, we are satisfied the documents involve a Staff-level debate and discussion about the adequacy of certain RAI responses and the possible need for additional RAIs. This discussion and the decision whether to issue additional RAIs would not seem to require the involvement of the Division Director. His involvement in these deliberations is not required to make them deliberative communications.[31] While the level of the deliberations may be a factor in assessing the extent of the chill that the disclosure of the document might cause, and in balancing this consideration against the movant's need for the document in the litigation, lower-level discussions are not, *per se,* not deliberative.

On the foregoing basis, we conclude that the Staff has demonstrated that the documents in question here qualify for the deliberative process privilege.

c. Assertion of the Deliberative Process Privilege

This case presents two interrelated issues concerning the NRC Staff's assertion of deliberative process privilege for the documents in question. First, does the ''head of department'' requirement apply when the deliberative process privilege is asserted by the NRC Staff? Second, if so, must this official make the decision to assert the privilege when Staff first asserts the privilege, withholds the otherwise discoverable document, and instead places it on the privilege log required by 10 C.F.R. § 2.336(b)(5)? We answer both of these questions in the affirmative.

We hold that the NRC Staff's decision to assert the deliberative process privilege over a document, while not requiring the involvement of the ''head of the agency,''[32] must at least be made by a person, such as the head of the department or division, having both expertise and an overview-type perspective concerning the balance between the agency's duty of disclosure versus its need

[31] In contrast, the level of the person deciding to assert the privilege is important because part of the justification for high-level review of privileged documents is that someone with ''both expertise and an overview-type perspective,'' *Coastal Corp. v. Duncan,* 86 F.R.D. at 517, can make the balancing decision (possible chilling effect vs. basic duty to disclose) as to whether the agency truly needs to assert the privilege and withhold the relevant and otherwise discoverable documents.

[32] In the context of the NRC Staff, the ''head of the agency'' (which we do *not* require) would probably be the Executive Director for Operations, given that the Commissioners and their immediate staff might have an appellate adjudicatory function in this matter. *See generally* 10 C.F.R. § 2.348.

to conduct frank internal debate and deliberation without the chilling effect of public scrutiny.[33] The deliberative process privilege is a form of executive privilege and is not to be lightly invoked.[34] The decision to assert it is not merely a technical determination as to whether a document is predecisional or deliberative, but involves a discretionary balancing of the agency's interests by a person who is above the fray of the immediate dispute or litigation.[35] This balancing and judgment is particularly important in Subpart L proceedings, where the hearing file and the Staff's mandatory disclosure of documents, as the only Staff discovery available to an intervenor, are fundamental. As stated above, the ''head of department'' requirement is the rule in the vast majority of federal cases and there is no reason why NRC Staff should be exempt. Indeed, in the only two NRC cases on point, Licensing Boards have required that the head of the agency or department assert the deliberative process privilege.[36]

Applying these principles to the facts of this case, we hold that the decision of the project engineer and the Staff counsel litigating this case, who were the only people involved in the Staff's decision to withhold the documents from the mandatory disclosure and instead to place them on the deliberative process privilege logs (dated July 27, 2005, and September 6, 2005), did not comply with the legal requirements of the deliberative process privilege. However, we agree with the Staff and the State that the Division Director, who subsequently made the decision to assert the privilege, was of sufficiently high position to invoke the deliberative process privilege for the documents at issue. Staff Response at 10-11; State Answer to Staff Response at 2. In *Landry,* the regional director of the FDIC's division of supervision, rather than the head of the FDIC, was permitted to assert the deliberative process privilege. *Landry,* 204 F.3d at 1136. In the present

---

[33] For example, in the High-Level Waste proceeding, the NRC Staff, DOE, and the State of Nevada all designated and agreed as to the minimum senior-level individual who would assert the deliberative process privilege. *See U.S. Department of Energy* (High-Level Waste Repository: Pre-Application Matters), NRC Staff Response to Issues Identified at First Case Management Conference at 8-10 (May 12, 2005); [DOE]'s Memorandum in Response to May 11, 2005 Memorandum and Order Regarding Second Case Management Conference at 14-15 (May 12, 2005); State of Nevada's Memorandum Regarding Issues Arising from the Board's May 4, 2005 Hearing at 13-14 (May 12, 2005).

[34] *See Cheney,* 542 U.S. at 389 (''[e]xecutive privilege is an extraordinary assertion of power 'not to be lightly invoked' '') (quoting *Reynolds,* 345 U.S. at 7).

[35] *See, e.g., Marriott International Resorts, L.P. v. United States,* 61 Fed. Cl. 411, 417 (2004) (requiring ''familiarization with the documents involved and a determination that disclosure would significantly and adversely affect the agency's vital functions''); *Resolution Trust Corp. v. Diamond,* 773 F. Supp. 597, 602 (S.D.N.Y. 1991) (requiring the ''expertise of the agency head . . . to exercise discretion to determine whether the public interest in confidentiality outweighs the public interest in disclosure'').

[36] *See West Chicago,* LBP-85-38, 22 NRC at 627 (requiring an affidavit from the head of the relevant agency of the State of Illinois); *Shoreham,* LBP-83-72, 18 NRC at 1223 (requiring an affidavit from the head of the Federal Emergency Management Agency).

case, the Division Director is responsible for the particular division handling the Vermont Yankee EPU application. Therefore, this individual is high enough above the fray to offer ''both expertise and an overview-type perspective'' so as to make the review of the claimed documents meaningful.

Assuming it is applicable to adjudicatory proceedings at all, NRC Management Directive 3.4 supports this result. It specifies that ''Office Directors and Regional Administrators'' are the persons authorized to ''[g]rant permission for the release of draft or predecisional information.'' NRC Management Directive 3.4, *Release of Information to the Public* 4 (rev. Dec. 1, 1999). The Staff notes that ''Management Directive 3.4 specifically empowers Office Directors to protect predecisional agency documents [and] [t]he Office of Nuclear Reactor Regulation . . . has further delegated responsibility to Division Directors to withhold privileged documents pursuant to ADM-200.'' Staff Response at 11.

As to the second question, it is clear to us that Staff's decision to assert the deliberative process privilege occurs at the moment when the Staff first withholds the otherwise discoverable document and instead places it on the privilege log required by 10 C.F.R. § 2.336(b)(5). That is the decision that requires the involvement of the appropriate senior person. The Staff's mandatory disclosures in Subpart L proceedings must be made ''without further order or request from any party,'' 10 C.F.R. § 2.336(b), and the privilege is asserted or invoked at the instant the document is placed on the privilege log. This decision to withhold an otherwise discoverable document is not a mere ''initial determination'' because, in a Subpart L proceeding, and absent the filing of a motion to compel and litigation over the issue, it results in the permanent withholding of an otherwise discoverable document from a litigant and is, in short, ''in derogation of the search for the truth.'' *See Nixon,* 418 U.S. at 710. The Staff, which has a responsibility to protect the public interest, should not assert this executive privilege lightly.

The Staff raises the specter of a ''formal invocation process'' and argues that there is no reason why it should be applied when the Staff makes its ''initial determination'' to withhold a document from mandatory disclosure. Staff Response at 7. It denigrates the importance of such mandatory disclosures and argues that ''[u]nless and until a party informs the Staff that it wishes to obtain a document which has been withheld as privileged, the agency has no reason to go through a formal 'invocation' process to support that claim of privilege.'' *Id.* at 8. The Staff avers that requiring a senior person to review documents and assert the privilege would cause an ''excessive and unnecessary burden,'' would ''bog down the agency's management in endless document review,'' and ''would adversely affect the agency's ability to carry out its statutory functions.'' Staff Response at 8-9. We are not persuaded.

First, nothing we have said imposes a ''formal invocation process'' on the Staff. There is no talismanic significance to the words ''invoke'' or ''invocation''; they merely mean to ''assert'' or ''claim'' that a document is privileged. Some

relatively senior individual must make the decision to assert or ''invoke'' the privilege, but we impose no ''process,'' formal or otherwise, on that person or on the Staff. Nor do we rule that a specific level of senior executive must always assert the privilege. Further, since the nondisclosure of otherwise discoverable documents in an adjudicatory hearing is clearly an adjudicatory issue within the purview of this Board, we are not intruding into the Staff's performance of its ''nonadjudicatory activities.''[37] We merely require, consistent with the overwhelming majority of federal case law, that the Staff's determination to assert the deliberative process privilege over a document must be made by a department head who has reviewed the document and made the decision.[38]

Second, we are unpersuaded by the Staff's argument that ''the need to follow the 'invocation' procedures does not arise until a motion to compel is filed.'' Staff Response at 10. To the contrary, the Staff is legally obligated to disclose all documents, other than those for which it asserts a privilege, ''without further order or request from any party.'' 10 C.F.R. § 2.336(b). The Staff's position is inconsistent with this regulation and would inevitably cause motions to compel to proliferate, a result that is inconsistent with the purposes of mandatory disclosure. Further, postponing senior-level review until after the project engineer and litigating attorney had already asserted the deliberative process privilege could strongly predispose the senior person to affirm the privilege claim, to avoid publicly reversing and thus embarrassing his or her staff. The Staff's approach would undermine a key value inherent in senior-level review — to allow an individual who is above the fray of the immediate litigation tactics to weigh the potential chill that might be caused by disclosure against the agency's general duty to release documents and its specific duties to do so in Subpart L proceedings.[39]

While we recognize that our ruling will require some additional thought and effort by the Staff before it asserts the deliberative process privilege over a document, we believe that the burden is a reasonable one, is required by the

---

[37] *See Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-6, 59 NRC 62, 74 (2004).

[38] *See, e.g., Reynolds,* 345 U.S. at 7-8 (''[t]here must be a formal claim of privilege, lodged by the head of the department which has control over the matter''); *Landry,* 204 F.3d at 1136.

[39] The Staff rightly points out that in both *West Chicago,* LBP-85-38, 22 NRC at 627, and *Shoreham,* LBP-83-72, 18 NRC at 1223, the Board gave the head of the agency a specified number of days (10 and 15, respectively) within which to submit an affidavit and argues that the Staff should enjoy the same benefit here. Staff Response at 9. We find this argument unpersuasive. First, this Board's September 30, 2005 Order gave the Staff an even greater amount of time (20 days) within which to submit the affidavit regarding the previously asserted privilege logs. Second, this decision, like the two cited cases, does not require an *affidavit or declaration* from the Division Director until *after* a motion to compel is filed. Third, neither of the prior cases dealt with the mandatory disclosure and privilege log requirements of 10 C.F.R. § 2.336(b), which impose an affirmative duty ''without further order or request'' to disclose documents in lieu of all other discovery.

law and regulations, and is far outweighed by the time and effort that would be imposed if the Staff's position (requiring the filing of motions to compel) were accepted. The Staff's burden — that a senior person review the document and make the decision whether to assert the deliberative process privilege *before* it is withheld under 10 C.F.R. § 2.336(b)(3) — is relatively modest. No affidavit or declaration is required from this person at the time the document is listed on the privilege log.[40] No process, formal or otherwise, is mandated. The level of seniority required is a case-by-case determination, dependent on the size and nature of the case.[41]

We reject the dire predictions that Division Directors will be overwhelmed and that the burden on them will ''adversely affect the agency's ability to carry out its statutory functions.'' Staff Response at 8-9. And it bears noting that a fair adjudicatory hearing process, whereby members of the public are afforded the opportunity to raise, and have resolved, appropriate challenges to safety and technical aspects of a proposed licensing action, helps to promote NRC's mission to protect the public against unreasonable risks to health and safety, and is itself a key ''statutory function'' of the agency. *See* 42 U.S.C. § 2239(a). Under these circumstances, we see no unreasonable burden in requiring a senior person to make the decision whether to withhold an otherwise discoverable document and assert the deliberative process privilege.

Finally, whatever burden that is involved in requiring that a senior-level person make the decision to assert the deliberative process privilege is less than the burden that the Staff would have us transfer to the other parties and the Board. The Staff's position, requiring a motion to compel before the Division Director has even looked at the documents, shifts all of the burden to the Intervenors, who are likely least able to bear it. In particular, Intervenors must go to the time, effort, and expense of drafting a motion to compel and a supporting brief, without

---

[40] An affidavit or declaration will be required only if a motion to compel is filed.

[41] This result is entirely consistent with *West Chicago* and *Shoreham,* both of which required that the deliberative process privilege be asserted by the head of the respective agencies or departments. *West Chicago,* LBP-85-38, 22 NRC at 627; *Shoreham,* LBP-83-72, 18 NRC at 1223. These cases were conducted long before the NRC eliminated discovery for licensing proceedings and imposed the mandatory disclosure requirements, which change the situation dramatically by requiring disclosure ''without further order or request from any party.'' 10 C.F.R. § 2.336(b). Certainly, in both cases, the Board issued an order providing the offending party some additional time in which to submit an affidavit or declaration from the head of the department. Likewise in this case, once the issue was raised and a motion to compel filed, the Board provided the Staff additional time within which to have the appropriate senior individual make the privilege determination. *See* September 30, 2005 Order at 3. In none of these cases was the Board obliged to provide the privilege claimant with additional time to carry its burden of meeting the requirements for the deliberative process privilege. Our conclusion here — that senior-level determination is required before the Staff can place a document on the deliberative process privilege log, and that the submission of a formal affidavit or declaration is not required unless and until a motion to compel is filed — is consistent with these two cases.

knowing who made the determination to assert the privilege, possibly without sufficient information to assess the validity of the claimed privilege, and without the right to file a reply. This approach would burden the parties, the Board, and the hearing process with numerous and unnecessary motions and disputes. This is not consistent with the purpose of mandatory disclosures and privilege logs. On balance, although a modest burden is involved in the determination to assert the privilege, it is appropriately placed, by law and reason, on the party asserting it.

3. Absence of Demonstrated Overriding Need

Having concluded that the three documents involved in State Motion I and the twenty-five documents involved in State Motion II satisfy the requirements of the deliberative process privilege, a qualified privilege, we now turn to the question as to whether the State has shown a sufficient need for the documents in this litigation to override the privilege. We think not.

The State makes three arguments.[42] First, the State declares that the documents, which relate to the station blackout analysis, are relevant to its contentions concerning the need for containment overpressure. State Motion I at 6. Second, the State asserts that the Staff might as well disclose the documents now because ''in the near future, when the Staff publishes its initial position on the EPU, these documents will have to be produced since they will no longer be pre-decisional.'' State Motion I at 10. Third, the State says that ''the extent to which the documents contain *important* information that will *materially* assist [the State] . . . cannot be ascertained,'' but it is ''apparent the documents relate to an important coping analysis.'' State Motion I at 11.

We cannot conclude, based on the foregoing statements, that the State has carried its burden of demonstrating an overriding need for the documents. We posit that documents relating to the station blackout analysis are relevant to the containment overpressure contentions. Relevance alone is not sufficient. Other than asserting that the documents relate to an important coping analysis, the State fails to explain or demonstrate how this establishes an overriding need for the documents.

We also reject the argument that documents will no longer be predecisional once the Staff makes a decision as to whether to issue the particular RAI in question. Documents that are protected by the deliberative process privilege do not lose their protected status after a final agency decision is made, because post-decisional release would have the same pernicious effect as predecisional

[42] These arguments were made in State Motion I, but the State has incorporated by reference the arguments made in its first motion in State Motion II at 2-3.

release — to inhibit the Staff from a thorough discussion of issues and options for fear of public airing of these internal discussions.[43]

III. CONCLUSION

We conclude that although the Staff's original claim that the twenty-eight documents are protected by the deliberative process privilege was deficient because the Staff failed to provide ''sufficient information'' to assess the privilege in its privilege log and because the decision to assert the privilege was not made by the ''head of the department,'' the Staff subsequently remedied these problems and has demonstrated that the documents qualify for the privilege. We further conclude that the State has not made a showing of substantial need for the documents that would override the deliberative process privilege. Therefore, the State's August 31, 2005, and September 29, 2005, motions to compel the production of documents are denied. Likewise, the State's motions for oral argument and for the opportunity to file reply briefs on State Motions I and II are denied.

Further, with regard to all deliberative process privilege logs hereinafter filed in this proceeding, we order that the log include, for each document, the name and job title of the most senior person who made the decision to withhold the document and assert the privilege. This person must be senior enough to have both the expertise and overview perspective to balance the agency's duties of disclosure against its need to conduct internal deliberations and to make the discretionary determination that the agency will assert the deliberative process privilege. We also encourage the Staff to provide ''sufficient information for assessing'' the validity of the privilege claim, as required by 10 C.F.R. § 2.336(b)(5), so as to avoid unnecessary disputes over documents on its privilege logs. With regard to the Staff's deliberative process privilege logs disclosed before the date of this order but after September 6, 2005 (the date of the log challenged by State Motion II), the Staff shall have 30 days from the date of this Order to resubmit them in conformance with the foregoing requirements.[44]

---

[43] *See, e.g., Federal Open Market Committee v. Merril,* 443 U.S. 340, 360 (1979).

[44] This Memorandum and Order does not alter or expand the completed briefing on State Motion III.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD[45]

Alex S. Karlin, Chairman
ADMINISTRATIVE JUDGE

Dr. Anthony J. Baratta
ADMINISTRATIVE JUDGE

Lester S. Rubenstein
(by G.P. Bollwerk)
ADMINISTRATIVE JUDGE

Rockville, Maryland
December 21, 2005

[45] Copies of this Order were sent this date by Internet e-mail transmission to counsel for (1) Licensees Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc.; (2) Intervenors Vermont Department of Public Service and New England Coalition of Brattleboro, Vermont; and (3) the Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

J.E. Dyer, Director

In the Matter of	**Docket Nos. 50-334** **50-412** **(License Nos. DPR-66,** **NPF-73)**
FIRSTENERGY NUCLEAR OPERATING COMPANY **(Beaver Valley Power Station, Units 1 and 2)**	**December 3, 2005**

The Petitioner requested that the Nuclear Regulatory Commission (NRC) either (1) take enforcement action against FirstEnergy Nuclear Operating Company and impose a civil penalty of at least $55,000, or (2) move the license renewal application for the Beaver Valley Power Station, Units 1 and 2 (BVPS-1 and -2), to the end of the current review queue. The Petitioner stated that the Licensee's February 9, 2005, license renewal application was not complete and accurate in all material respects, in violation of 10 C.F.R. § 50.9(a).

The final Director's Decision on this petition was issued on December 3, 2005. That Decision addresses two items related to whether enforcement action should be taken against the Licensee regarding its license renewal application. The first is whether a violation of NRC regulations occurred, and the second is whether enforcement action including issuance of a civil penalty of $55,000 is appropriate, as requested in your petition.

With respect to the first issue, the NRC Staff concluded that a violation of 10 C.F.R. § 54.13 did occur rather than a violation of 10 C.F.R. § 50.9, as stated in the petition. For the requirement to provide complete and accurate information, 10 C.F.R. § 54.13 applies to license renewal applications rather than 10 C.F.R. § 50.9.

Regarding the second issue, the NRC Staff determined that the violation was minor. Pursuant to section 3.9 of the NRC Enforcement Manual, the NRC

did not document its identification of this minor violation in an inspection report. However, in its April 19, 2005, letter, the Licensee acknowledged its deficiency in failing to provide a complete license renewal application, and the Staff has verified that the Licensee has entered the deficiencies leading to the failure to properly validate information in its corrective action program and has completed immediate corrective actions with long-term corrective actions in progress. Pursuant to section 3.9 of the NRC Enforcement Manual and the NRC Enforcement Policy, sections IV.B and VI.A-B, and Supplement VII.E, the NRC did not cite this minor violation and did not propose a civil penalty. Consequently, the NRC denied the request that enforcement action be taken.

Accordingly, NRC denied the Petitioner's requests as stated above.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

I. INTRODUCTION

By letter dated April 12, 2005, Mr. David Lochbaum of the Union of Concerned Scientists (the Petitioner) filed a petition pursuant to Title 10 of the *Code of Federal Regulations* (10 C.F.R.), section 2.206. The Petitioner requested that the Nuclear Regulatory Commission (NRC or Commission) either (1) take enforcement action against FirstEnergy Nuclear Operating Company (FENOC or the Licensee) and impose a civil penalty of at least $55,000, or (2) move the license renewal application for the Beaver Valley Power Station, Units 1 and 2 (BVPS-1 and -2), to the end of the current review queue.[1]

As a basis for the requests, the Petitioner cited NRC news release 05-052, dated March 24, 2005, which stated that the NRC returned the February 9, 2005, license renewal application submitted by FirstEnergy Nuclear Operating Company. Mr. Lochbaum quoted a statement made by Mr. David Matthews, Director of the Division of Regulatory Improvement Programs at NRC:

> The NRC's primary mission is ensuring protection of public health and safety, and we cannot do that for an additional 20 years of Beaver Valley operation unless we have complete, accurate, and up-to-date information on the plant. Given the gaps in the current application, we simply could not properly review FirstEnergy's request.

[1] The NRC determined and notified the Petitioner by letter dated May 25, 2005, that the Petitioner's request for moving the license renewal application for BVPS-1 and -2 to the end of the current review queue did not meet the guidelines for consideration pursuant to 10 C.F.R. § 2.206.

Mr. Lochbaum further stated that the Licensee's February 9, 2005, submittal was not complete and accurate in all material respects and that this is a violation of 10 C.F.R. § 50.9(a) which requires, in part, that information provided to the Commission by a licensee shall be complete and accurate in all material respects. Mr. Lochbaum stated his basis for the alternative sanction of moving the license renewal application: Moving the application to the end of the current queue would allow time for the Licensee to ensure the resubmittal is complete and accurate. It would also allow NRC to review the application without requiring additional resources to recheck the resubmittal concurrent with other license renewal reviews, which Mr. Lochbaum stated could compromise the quality of the NRC review.

The NRC's Petition Review Board (PRB) met on April 19, 20, and 28, 2005, to discuss the requests to take enforcement action and issue at least a $55,000 civil penalty or, alternatively, move the Licensee's application to the end of the current review queue. Mr. Lochbaum declined an invitation to participate in the initial PRB discussions.

In an acknowledgment letter dated May 20, 2005, the NRC informed the Petitioner that the portion of the petition requesting that enforcement action be taken was accepted for review under 10 C.F.R. § 2.206 and had been referred to the Office of Nuclear Reactor Regulation for appropriate action.

Copies of the petition and acknowledgment letter are available for inspection at the Commission's Public Document Room (PDR) at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland, and from the NRC's Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the NRC Web site at <*http://www.nrc.gov/reading-rm/adams.html*> under ADAMS Accession No. ML050180430. Persons who do not have access to ADAMS or who have problems in accessing the documents in ADAMS should contact the NRC PDR reference staff by telephone at 1-800-397-4209 or 301-415-4737 or by e-mail to *pdr@nrc.gov*.

II. DISCUSSION

As a basis for the requested actions, the Petitioner stated that numerous aids and guidance documents, which are linked to the NRC's Web site, could have been used to assist the Licensee in ensuring it provided a complete and accurate application for license renewal. The Petitioner further stated that the twenty-eight previously approved license renewal applications, and the publicly available safety evaluations related to those applications, would have provided ample guidance to the Licensee for providing a complete and accurate license renewal application.

The Petitioner cited Enforcement Action (EA) EA-088, dated June 27, 2001, wherein NRC imposed a $55,000 civil penalty on the licensee of the Palisades Plant for failing to provide complete and accurate information to NRC in letters dated February 16 and 18, 2000, as a basis for issuing a civil penalty of at least $55,000 to the Licensee for BVPS-1 and -2. The Petitioner noted that, in EA-088, NRC acknowledged to the Palisades Plant licensee that the failure to provide complete and accurate information was the result of an oversight by members of the licensee's staff and not a deliberate attempt to withhold information material to NRC's decisionmaking process. Nonetheless, NRC issued the $55,000 civil penalty to the Palisades Plant licensee. The Petitioner stated that FENOC deserves the same sanction for the same violation.

The Petitioner further states that FENOC is currently under investigation by the Department of Justice, based on a September 2003 referral by NRC, for failing to provide complete and accurate information to the NRC in Fall 2001. The Petitioner also referenced the Licensee's October 24, 2003, letter to the NRC Region III Regional Administrator, which stated that FENOC has taken actions to ensure that future regulatory submittals are complete and accurate in all material respects, as further evidence that the Licensee has knowledge of the regulatory consequences for failing to provide complete and accurate information. The Petitioner stated that the Licensee should pay the consequences of failing to follow the commitment contained in the October 24, 2003, letter to properly validate statements of fact used in regulatory submittals before the submittals are issued to NRC.

A. Petitioner's Concerns

Despite stating in an October 24, 2003, letter to the NRC Region III Regional Administrator that corrective actions had been implemented to properly validate statements of fact contained in all future regulatory submittals before the submittals can be issued to NRC, the Petitioner stated that the Licensee submitted incomplete and inaccurate information in its license renewal application for BVPS-1 and -2 and that the Licensee should be cited pursuant to 10 C.F.R. § 50.9 for failing to provide an application that was complete and accurate in all material respects and assessed a civil penalty of at least $55,000. These concerns and the NRC Staff's evaluation of the concerns are discussed below.

B. NRC Staff's Evaluation

The Licensee submitted its BVPS-1 and -2 license renewal application on February 9, 2005. The NRC Staff performed an acceptance review of the license renewal application to determine if sufficient information existed for the NRC

Staff to begin its detailed technical review. The NRC Staff determined that the application did not contain sufficient detail and therefore was not acceptable for docketing. This determination was conveyed to the Applicant by letter dated March 24, 2005. The Licensee responded to this letter by letter dated April 19, 2005.

All but one of the statements in the application, which were alleged by the Petitioner to be incomplete or inaccurate in violation of section 50.9, required additional information or clarification from the Licensee. The statements were insufficient in the sense that additional levels of detail were required for the NRC Staff to conduct its review and develop a sufficient basis to support a regulatory decision. The NRC rules on completeness and accuracy of information were intended to apply a rule of reason in assessing completeness of information and also whether the NRC relied upon the information (''Completeness and accuracy of information,'' 52 Fed. Reg. 49,362 (Dec. 31, 1987).

The NRC Staff determined during its acceptance review that there were four examples of technically incorrect information contained in the application. In one of these examples, the Licensee stated that cast iron was used in the reactor coolant system. This statement was factually inaccurate, and a violation of 10 C.F.R. § 54.13, ''Completeness and accuracy of information.'' This regulation provides that information provided by an applicant for a renewal license must be complete and accurate in all material respects. Section 54.13 applies to license renewal applications and is analogous to section 50.9, ''Completeness and accuracy of information,'' contained in Part 50 and cited by the Petitioner.

In the remaining three examples of technically incorrect information, the NRC Staff would require additional information to determine if these examples were also violations of section 54.13. The Staff did not pursue this additional information because, in part, it was not used as the basis for a regulatory decision.

All four examples of technically incorrect information were easily identified by the NRC Staff and, in part, influenced the Staff's decision to return the renewal application. The fact that the Staff did not use this information as the basis for making a regulatory decision, in part, determines the significance of the violation or potential violation. This information, had it been considered complete and accurate, as a minimum, would not have resulted in the reconsideration of a regulatory position or lead to further inspection or substantive further inquiry in the form of a formal request for additional information. As such, the violation would not be considered for escalated enforcement or warrant a civil penalty in accordance with Supplement VII.C.1 of the NRC Enforcement Policy.

In its letter of April 19, 2005, the Licensee indicated that it would take corrective action to address the deficiencies contained in its license renewal application. In a public meeting on July 22, 2005, the Licensee provided the results of its root-cause investigation of the failure to properly validate the information contained in its license renewal application and its plans to revalidate

the license renewal application's technical supporting information. In a letter dated August 11, 2005, the Licensee described its plans for correcting the deficiencies in its license renewal application in order to support a resubmission of the application by the end of the first quarter of 2007. The Licensee has entered the deficiencies leading to the failure to properly validate information violation in its corrective action program and has completed immediate corrective actions with long-term corrective actions in progress.

The NRC Staff has determined that the submission of incorrect information is a violation of section 54.13 and is appropriately classified as minor. Pursuant to section 3.9 of the NRC Enforcement Manual,[2] NRC did not document its identification of this minor violation in an inspection report or correspondence to the Applicant. Pursuant to section 3.9 of the NRC Enforcement Manual and the NRC Enforcement Policy, sections IV.B and VI.A-B and Supplement VII.E, NRC did not cite this minor violation and did not propose a civil penalty.

The Petitioner cites EA-01-088, dated June 27, 2001, which related to a Palisades enforcement action and issuance of a civil penalty as a basis for issuing at least a $55,000 civil penalty for the BVPS-1 and -2 Licensee. In the Palisades case, the failure to provide complete and accurate information affected the NRC's ability to perform its regulatory function and resulted in the issuance of a Notice of Enforcement Discretion and exigent Technical Specification change with an incomplete understanding of the potential safety impact of the plant. Because the NRC did not accept the BVPS-1 and -2 Licensee's license renewal application for docketing, the NRC's regulatory function was unaffected. Accordingly, with respect to this violation of section 54.13, the request to cite the Licensee for the violation and assess a civil penalty of at least $55,000 is denied.

III. CONCLUSION

Based on the above, the NRC Staff concludes that the Licensee did submit an inaccurate statement in its February 9, 2005, license renewal application in violation of section 54.13, that the violation has been processed in the Licensee's corrective action program, and that in accordance with the NRC Enforcement Policy and the NRC Enforcement Manual, no citation was issued and no civil penalty assessed for the violation. Accordingly, NRC denies the Petitioner's requests as described in Section I, above.

As provided in 10 C.F.R. § 2.206(c), a copy of this Director's Decision will be filed with the Secretary of the Commission for the Commission to review. As provided for by this regulation, the Director's Decision will constitute the final

[2] ''While licensees must correct minor violations, minor violations do not normally warrant documentation in inspection reports or inspection records and do not warrant enforcement action.''

action of the Commission 25 days after the date of the Director's Decision unless the Commission, on its own motion, institutes a review of the Director's Decision within that time.

FOR THE NUCLEAR REGULATORY COMMISSION

J.E. Dyer, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 3d day of December 2005.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

J.E. Dyer, Director

In the Matter of **Docket No. 50-271**
(License No. DPR-28)

ENTERGY NUCLEAR VERMONT YANKEE, LLC, and ENTERGY NUCLEAR OPERATIONS, INC.
(Vermont Yankee Nuclear Power Station) **December 23, 2005**

The Petitioner requested that the Nuclear Regulatory Commission (NRC) require Entergy Nuclear Vermont Yankee (ENVY), the Licensee for Vermont Yankee, to (1) promptly conduct a review at Vermont Yankee to determine the extent of condition, including a full inventory of the type, amount, application, and placement of Hemyc, and an assessment of the safety significance of each application; (2) provide justification for operation in nonconformance with 10 C.F.R. Part 50, Appendix R; and (3) upon finding that Vermont Yankee is operating in an unanalyzed condition and/or that assurance of public health and safety is degraded, promptly order a power reduction (derate) of Vermont Yankee until such time as it can be demonstrated that ENVY is operating in conformance with 10 C.F.R. Part 50, Appendix R, and all other applicable regulations. The petition, as supplemented, also requested that the Licensee's review for extent of condition be expanded beyond Hemyc to include other fire barriers.

The final Director's Decision on this petition was issued on December 23, 2005. The final Decision addresses the Petitioner's requested actions as follows: As a basis for the requested actions, the Petitioner's primary concern was the quality of the Vermont Yankee fire barriers, including Hemyc, and the effect on compliance with the requirements of 10 C.F.R. Part 50, Appendix R. However, in its inspections of fire protection at Vermont Yankee, which included the review of numerous fire barriers and penetrations, the NRC did not identify any safety

concerns other than the unresolved item related to Hemyc. Furthermore, by letter dated August 17, 2005, ENVY stated that on July 28, 2005, they completed replacement of Hemyc in systems that are credited in the Vermont Yankee safe shutdown capability analysis. This is the analysis that supports compliance with 10 C.F.R. Part 50, Appendix R.

Therefore, the NRC Staff concludes that the Petitioner's concerns have been adequately addressed by the Licensee's corrective actions.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

I. INTRODUCTION

By letter dated May 3, 2005, Mr. Raymond Shadis of the New England Coalition (NEC or the Petitioner) filed a petition pursuant to Title 10 of the *Code of Federal Regulations* (10 C.F.R.), section 2.206, with the Nuclear Regulatory Commission (NRC or the Commission). NRC Information Notice 2005-07, ''Results of Hemyc Electrical Raceway Fire Barrier System [ERFBS] Full Scale Fire Testing,'' dated April 1, 2005, informed the operators of nuclear power plants that the Hemyc ERFBS did not perform for 1 hour as designed. The NRC listed Vermont Yankee Nuclear Power Station (Vermont Yankee) among the sites that had installed Hemyc ERFBS. The NEC petition requested that the NRC promptly restore reasonable assurance of adequate protection of public health and safety with regard to the fire barriers in electrical cable protection systems at Vermont Yankee, or otherwise to order a derate of Vermont Yankee until such time as the operability of the fire barriers can be assured. Specifically, the petition requested that the Commission take the following actions: (1) promptly conduct a review at Vermont Yankee to determine the extent of condition (e.g., the extent to which Hemyc is used at Vermont Yankee), including a full inventory of the type, amount, application, and placement of Hemyc, and an assessment of the safety significance of each application; (2) require Entergy Nuclear Vermont Yankee (ENVY or the Licensee) to promptly provide justification for operation in nonconformance with 10 C.F.R. Part 50, Appendix R; and (3) upon finding that Vermont Yankee is operating in an unanalyzed condition and/or that assurance of public health and safety is degraded, promptly order a power reduction (derate) of Vermont Yankee until such time as it can be demonstrated that ENVY is operating in conformance with 10 C.F.R. Part 50, Appendix R, and all other applicable regulations.

Mr. Raymond Shadis, in his capacity as the Petitioner's Staff Technical Advisor, participated in a telephone conference call with the NRC's Petition Review Board (PRB) on May 17, 2005, to discuss the petition. The teleconference

was transcribed and the transcription was treated as a supplement to the petition. In the conference call, the Petitioner modified the first request because it did not constitute a request for enforcement action consistent with the 10 C.F.R. § 2.206 process. The request was modified to require the Licensee, rather than the NRC, to conduct the review to determine the extent of condition. During the conference call, the Petitioner also requested that the Licensee review fire barriers beyond the Hemyc ERFBS.

After the conference call, the PRB discussed the request to promptly order a derate of Vermont Yankee and to review fire barriers beyond Hemyc. The NRC had already determined that immediate action was not necessary. When the Hemyc test results became available, the NRC Staff examined whether there was an immediate and significant risk to safety. Because fire detection, prevention, and suppression measures were already in place to minimize both the probability of occurrence and consequences of a fire that could prevent the performance of safe shutdown functions, the Staff concluded that continued plant operation while corrective actions were implemented did not pose an undue risk to public health and safety. In addition, the NRC Staff confirmed that fire watches were implemented at Vermont Yankee as a compensatory measure until the corrective actions were completed (i.e., replacement of the Hemyc ERFBS). As for the request that the Licensee review fire barriers beyond the Hemyc ERFBS, the Petitioner did not provide adequate information to justify expanding the scope of the review. On June 13, 2005, the NRC Staff notified the Petitioner that, based on the recommendations of the PRB, the request for immediate action and the request to expand the scope to cover additional fire barriers were denied.

In an acknowledgment letter dated June 15, 2005, the NRC informed the Petitioner that the petition was accepted, in part, for review under 10 C.F.R. § 2.206 and had been referred to the Office of Nuclear Reactor Regulation for appropriate action.

Copies of the petition, transcript, and acknowledgment letter are available for inspection at the Commission's Public Document Room (PDR) at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland and from the NRC's Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the NRC Web site at *http://www.nrc.gov/reading-rm/adams.html* under ADAMS Accession No. ML051610117. Persons who do not have access to ADAMS or who have problems in accessing the documents in ADAMS should contact the NRC PDR reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to *pdr@nrc.gov*.

The NRC Staff sent a copy of the proposed Director's Decision (DD) to the Petitioner for comment on October 11, 2005. The NRC Staff did not receive any comments on the proposed DD.

II. DISCUSSION

As a basis for the requested actions, the Petitioner's primary concern was the quality of the Vermont Yankee fire barriers, including Hemyc, and the effect on compliance with the requirements of 10 C.F.R. Part 50, Appendix R. However, in its inspections of fire protection at Vermont Yankee, which included the review of numerous fire barriers and penetrations, the NRC did not identify any safety concerns other than the unresolved item related to Hemyc ERFBS (NRC Inspection Report 05000271/2001-003, July 27, 2001, ADAMS Accession No. ML012080293). Furthermore, by letter dated August 17, 2005, ENVY stated that on July 28, 2005, they completed replacement of Hemyc on systems that are credited in the Vermont Yankee safe shutdown capability analysis. This is the analysis that supports compliance with 10 C.F.R. Part 50, Appendix R. Therefore, the Staff concludes that the Petitioner's concerns have been adequately addressed by the Licensee's corrective actions.

III. CONCLUSION

The NRC Staff has reviewed the basis for the Petitioner's requested actions. Based on the information provided in Section II, the Staff concludes that the concerns regarding the use of Hemyc at Vermont Yankee have been adequately resolved such that no further action is needed. The Licensee has replaced the Hemyc on all equipment that is relied upon for compliance with 10 C.F.R. Part 50, Appendix R. Based on these conclusions, the NRC in effect granted the Petitioner's request by resolving the Petitioner's primary concern of the quality of the Hemyc fire barriers at Vermont Yankee.

As provided in 10 C.F.R. § 2.206(c), a copy of this Director's Decision will be filed with the Secretary of the Commission for the Commission to review. As provided for by this regulation, the Decision will constitute the final action of the Commission 25 days after the date of the Decision unless the Commission, on its own motion, institutes a review of the Decision within that time.

FOR THE NUCLEAR REGULATORY COMMISSION

J.E. Dyer, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 23d day of December 2005.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

Robert C. Pierson, Acting Director

In the Matter of

DEPARTMENT OF THE ARMY	**Docket Nos. 40-06394** **40-07086** **40-08814** **40-08838** **40-07354** **40-08779** **40-08767** **(License Nos. SMB-141,** **SUB-734,** **SMB-1411,** **SUB-1435,** **SUB-834,** **SUC-1391,** **SUC-1380)**
ATK TACTICAL SYSTEMS COMPANY, LLC	**Docket No. 40-08850** **(License No. SUB-1440)**
DEPARTMENT OF THE NAVY	**Docket No. 30-29462** **(License No. 45-23645-01NA)**
DEPARTMENT OF THE AIR FORCE	**Docket No. 30-28641** **(License No. 42-23539-01AF)**

December 30, 2005

The U.S. Nuclear Regulatory Commission (NRC) received a petition dated April 3, 2005, filed by Mr. James Salsman, representing himself. The petition

was supplemented on April 26, 2005, and May 4, 2005. The Petitioner requested that NRC immediately modify or revoke licenses of depleted uranium munition Licensees, issued to the Departments of the Air Force, Army, and Navy, and ATK Tactical Systems Company, LLC, and fine these Licensees for unsafe actions taken, and for actions not taken to provide adequate health and safety to the public. The Petitioner's concerns revolve around the combustion products of DU munitions, specifically hexavalent uranium trioxide (UO_3). Petitioner asserts that the Licensees never attempted to detect, never detected, and failed to recognize that hexavalent UO_3 is a hazardous combustion product when DU munitions are fired and heated at high temperatures. Petitioner contends that DU munitions licensed activity is unsafe and in violation of NRC requirements.

The final Director's Decision on this petition was issued on December 30, 2005. In that Decision, NRC stated that insofar as Petitioner requests to require DU munition Licensees to report incidents and overexposures to NRC, and to remediate facilities in accordance with current regulations, Petitioner's requests are granted. The Director decided to deny Petitioner's requests for modification and/or revocation of DU munitions licenses and for imposition of fines because Petitioner did not demonstrate that DU munitions Licensees violated any NRC requirement, or that licensed activity creates conditions hazardous to the public health and safety or to the environment not already considered in licensing or addressed by NRC requirements.

DIRECTOR'S DECISION UNDER 10 C.F.R § 2.206

I. INTRODUCTION

The U.S. Nuclear Regulatory Commission (NRC) provides members of the public with the means to request the Commission to take enforcement-related action to modify, suspend, or revoke a license, or to request other appropriate enforcement-related action, as may be proper. This policy is codified in section 2.206 of Title 10 of the *Code of Federal Regulations* (10 C.F.R. § 2.206). The Commission may grant a request for action, in whole or in part, take other action that satisfies the concerns raised by the requester, or deny the request. The NRC reviews requests that raise health and safety and other concerns without requesting enforcement-related action by means other than the 10 C.F.R. § 2.206 process.

By electronic mail dated April 3, 2005, as supplemented on April 26, 2005, and May 4, 2005, James Salsman (Petitioner) filed a petition, pursuant to 10 C.F.R. § 2.206, requesting that NRC take ''immediate action to correct the alleged misconduct on the part of uranium munition licensees, for the protection of the health and safety of people, including United States citizens and personnel, and the

environment.'' The Petitioner states the basis for the requests is ''gross negligence on the part of the licensees that involved exceptionally grave issues and significant safety and environmental issues'' and other serious misconduct, including fraud and willful wrongdoing, involving the hazardous nature of hexavalent uranium trioxide (UO_3). The requests in the petition that involve enforcement-related corrective actions, under NRC jurisdiction, are summarized as follows:

1. Require the Licensees referenced in the petition to document when and where significant quantities of hexavalent uranium have been ingested, inhaled, or released to the environment, and that each incident be recognized as a Severity Level I violation;

2. Find the Licensees referenced in the petition willfully negligent for their multiple Severity Level I violations because these Licensees never detected hexavalent uranium, never attempted to detect it, and never recognized its hazards as a product of combustion of depleted uranium (DU) munitions;

3. Find that, had the Commission known the true risk of pyrophoric uranium munitions, the Commission likely would not have issued the existing licenses without substantial and restrictive modification, if at all;

4. Find (1) that a Licensee officer's incorrect statement, on January 27, 2005, in asserting that ''scientific consensus is that remediation of sites where DU munitions were used is generally unnecessary,'' was self-serving and was made to intentionally and fraudulently mislead Licensees; and (2) that the assertion involved willful misconduct in misrepresenting the safety of hazardous licensed material contamination. Order the Licensee to: (1) publish a correction to its officer's false, willful, and fraudulent assertion of the statement; (2) modify licenses to prohibit Licensees from making any willful, false, or fraudulent statements; and (3) impose a $100,000-per-day fine for any delay in compliance;

5. Find that the Licensee's submission of invalid studies, provided in response to the Commission's queries regarding D. Rokke's 10 C.F.R. § 2.206 petition in October and November 2000, requires corrective action and corrective modification to licenses; and similarly, find that the continued willful publication of invalid statements and assertions concerning the safety of pyrophoric uranium munitions requires corrective modification to licenses, to require production of accurate valid studies of the safety of pyrophoric uranium, and publication of these studies; impose a $100,000-per-day fine for any delay; and suspend or revoke licenses in cases of delay in compliance;

6. Order Licensees to accurately determine the risk to health and safety of any and all known forms of inhalation and ingestion exposure to pyrophoric uranium munition combustion products, and risks associated with hexavalent uranium into the environment, risk ratios and their confidence intervals, under several sets of circumstances, modify their licenses based on this information, and impose a $100,000-per-day fine for any delays in complying with the order;

7. Order Licensees to: (1) determine the best safe and effective medical therapies for uranium poison victims; (2) determine the best remediation of sites where munitions were burned or combustion products reached groundwater, plant, or animal life, and mitigate and remediate these sites; (3) modify their licenses, based on this information; and (4) impose a $100,000-per-day fine for any delays in complying with the order;

8. Assess each incident of gross conduct, each incident of willful misconduct, and each identified fraudulent assertion concerning the safety of DU munitions or related contamination at a Severity Level I; fine the munition Licensees $100,000 for each of these identified incidents of all Severity Level I violations; and suspend the licenses immediately until corrective actions for these violations are completed.

Also, in the May 4, 2005, supplement to the petition, the Petitioner indicated that the quantities in Appendix B to 10 C.F.R. Part 20 for allowable intakes of uranium were designed to address only the radiological hazard of uranium, and not the heavy-metal toxicity, and that soluble compounds are far more toxic than the insoluble compounds. Since the Petitioner questions the adequacy of 10 C.F.R. Part 20 and has made a separate request for rulemaking to amend Part 20, this part of the petition will be addressed along with the petition for rulemaking. A notice of receipt of a petition for rulemaking from the Petitioner was published in the *Federal Register* on June 15, 2005 (70 Fed. Reg. 34,699).

The petition may be viewed in the NRC Agencywide Documents Access and Management System (ADAMS), Public Library component, on NRC's Web site, *http://www.nrc.gov* (the Public Reading Room), under Accession No. ML051240497.

The Petitioner met with the Nuclear Material Safety and Safeguards (NMSS) Petition Review Board via a teleconference on May 4, 2005, to discuss the petition. The transcript of this meeting was treated as a supplement to the petition, and is available in ADAMS at the Commission's Public Document Room, located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland, and from NRC's ADAMS Web site, under Accession No. ML051390187.

In a letter dated May 26, 2005, NRC informed the Petitioner that the request for immediate modification of the licenses referenced in the petition was denied

because there was no apparent immediate threat to public health and safety from continued operations under the current DU munitions licenses, and that the petition was being referred to NMSS for appropriate action.

NRC sent a copy of the proposed Director's Decision to the Petitioner and to the affected Licensees, for comment, on September 23, 2005. The Petitioner responded by e-mail with comments on October 19, 2005 (ML053210302), and the Licensees responded on October 12, 2005 (Army) (ML053210300), and October 17, 2005 (Air Force) (ML053210305). The comments and the NRC Staff's response to them are included in this final Director's Decision.

II. DISCUSSION

A. DU Munition Licenses

DU is a byproduct of the uranium fuel-enrichment process, having a higher percentage of uranium-238 and lower percentage (depletion) of uranium-235 than natural uranium. DU is used, among other things, in military munitions. Because of its high density and pyrophoric characteristics, it is more efficient in penetrating hard targets than conventional projectiles.

NRC has granted licenses authorizing the possession of DU for the purpose of using it in munitions to: (1) the U.S. Department of the Army (U.S. Army); (2) the U.S. Department of the Navy (U.S. Navy); (3) the U.S. Department of the Air Force (U.S. Air Force); and (4) a civilian manufacturing firm. The U.S. Army possesses individual licenses for seven sites. The U.S. Navy and U.S. Air Force both have a master materials license that includes authorization for DU munitions. The civilian organization has a single DU munitions license. Half the Army licenses do not authorize the firing of ammunition containing DU material. These licenses are for possessing, storing, transporting, and transferring DU munitions, or for use of DU in activities other than actively firing the munitions (such as manufacturing or deactivating the munition, or possession incident to the decommissioning of a site). Several of the remaining licenses give authority to test-fire DU munitions, but only in an enclosed environment (i.e., a building where the munition impacts its target in an environmentally closed system). Firing the DU munitions in an enclosed environment minimizes the impact of pyrophoric characteristics, radiologic hazard, and chemical toxicity to personnel and the environment.

B. Jurisdictional Limitations

The Petitioner requests remediation and mitigation of conditions resulting from licensed activities and from warfare use of DU munitions. The U.S.

Army, U.S. Navy, and the U.S. Air Force are permitted by their licenses to test-fire DU munitions. NRC licenses do not, however, address the warfare use of DU munitions, since NRC has no statutory authority to regulate such use. Accordingly, the Petitioner's request for NRC action regarding the warfare use of DU munitions is denied. With respect to Petitioner's request for remediation and mitigation of conditions resulting from test-firing of DU munitions pursuant to NRC licenses, the Petitioner's request is considered here, insofar as NRC regulates the decontamination and decommissioning of nuclear facilities, with the ultimate goal of license termination and release of a site for unrestricted use. (*See* Subpart E of 10 C.F.R. Part 20, and 10 C.F.R. § 40.42.)

C. Regulatory Limits for Uranium

The radioactive material concentration levels, contained in the tables of Appendix B to Part 20 regulations, are based on the recommendations of the International Commission on Radiological Protection (ICRP), and the U.S. counterpart to the ICRP, the National Council on Radiation Protection and Measurements (NCRP). The annual limits on intake (ALI) of a given radionuclide are levels of intake, within a year, that would result in either a committed effective dose equivalent of 0.05 sievert (5 rem) or a committed dose equivalent of 0.5 sievert (50 rem) to an organ or tissue. These quantities are based on the dose an individual would receive, from the radionuclide listed, once the radionuclide enters the body. For inhaled radionuclides, the different clearance rates from the lung to the blood or to the gastrointestinal tract depend on the chemical form of the radionuclide, and are classified as D, W, and Y, for clearance times of days, weeks, and years. The level listed for a given ALI pertains to the total quantity of the radionuclide, regardless of its original chemical composition in a clearance class when it enters the body.

For uranium, the chemical toxicity may be the limiting factor for intake. The value for the uranium air concentrations in footnote 3 in Appendix B to Part 20 is based on the recommendations of the American Conference of Government Industrial Hygienists (ACGIH). The ACGIH is an organization devoted to the administrative and technical aspects of occupational and environmental health. It is a professional society and not a government agency. The Occupational Safety and Health Administration (OSHA) pointed out, in 54 Fed. Reg. 2332 (Jan. 19, 1989), that the ACGIH is an organization of experts who are knowledgeable about the American workplace and the health literature. OSHA also noted that the ACGIH permits outside participation in development of exposure limits and solicits comment on proposed recommendations. OSHA relies on ACGIH research and recommendations to facilitate its rulemaking on limits for various substances.

From the 2001 ACGIH worldwide *Documentation of the Threshold Limit Values and Biological Exposure Indices* (7th Ed. 2001), a Threshold Limit Value (TLV) refers to airborne concentration of a substance and represents conditions under which it is believed that nearly all workers may be repeatedly exposed, day after day, without adverse health effects. TLVs are based on available information from industrial experience, experimental human and animal studies, or a combination of all three, when possible.

Currently, the ACGIH has assigned 0.2 milligram per cubic meter as a TLV time-weighted average (time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek), for soluble and insoluble natural uranium. This level appears in footnote 3 in Appendix B to Part 20, which states that chemical toxicity may be the limiting factor for soluble mixtures of uranium-238, uranium-234, and uranium-235 in air. The uranium air concentration limit for a 40-hour workweek is stated as 0.2 milligram per cubic meter of air average. Section 20.1201(e) of Part 20 contains the limit for chemical toxicity; it states that the soluble uranium intake limit is 10 milligrams per week. This quantity is derived by multiplying the 0.2 milligram-per-cubic-meter air concentration level by the amount of air an individual breathes in 40 hours. Natural uranium and DU are chemically the same.

D. Petitioner's Bases

The Petitioner based his request for corrective action on ''gross negligence and other serious misconduct including fraud, willful wrongdoing, and a serious breach of the public trust on the part of uranium munitions licensees and their officers, employees, contractors, and agents.'' He asserts that significant quantities of hexavalent UO_3 are released in combustion of DU, that Licensees never attempted to detect it, even though they knew, or should have known, that it was both hazardous and a product of uranium combustion.

The Petitioner indicated that the experiments, conducted and reported by researchers performing work for the Army concerning DU aerosol generation during use of DU munitions, failed to find or report an expected chemical state of uranium in the form of hexavalent uranium, particularly UO_3. The Petitioner stated that ''the uranium munitions licensees were never able to detect, and have never been able to detect monomolecular UO_3.'' The Petitioner cites numerous professional texts and journal articles to support his assertion that hexavalent uranium should be present after the use or testing of DU munitions, and that UO_3 is more similar to soluble uranyl salts than to the insoluble oxides. The Petitioner infers that rapid removal of UO_3 from the lung ''indicates that uranium trioxide is is [*sic*] as non-radiologically toxic as the most hazardous uranium compound,'' and states ''the non-radiological heavy metal toxicity of uranium

is a million-times worse than its radioactivity, with regard to certain aspects of biological poisoning, including genetic damage.''

The Petitioner states that the wrongdoing entails Licensees making intentional false statements to misrepresent the hazardous nature of licensed material and activities. The Petitioner considers the failure to report in the license application the presence of hexavalent UO_3 a false statement upon which NRC relied in granting the license for the possession and use of DU munitions. The Petitioner further asserts that grant of the license failed to protect public health and safety.

Also, in a meeting with the Petition Review Board on May 4, 2005, the Petitioner indicated that the Army submitted a list of studies and reports to NRC, in response to a June 2000 petition concerning DU munitions. The Petitioner indicates that two studies, one from 1979 and one from 1995, were submitted as authoritative and accurate regarding aspects of combustion products caused by the firing of DU munitions. The Petitioner asserts that the information submitted by the Army in response to the June 2000 petition, and particularly these two reported studies, is inaccurate, because the studies did not find or indicate the presence of UO_3 as a product of DU munitions firing.

E. Licensees' Responses to the Petition

On June 10, 2005, NRC notified affected licensees that a 10 C.F.R. § 2.206 petition had been submitted that involved their licenses. The correspondence also informed these Licensees that they could respond to the petition if they desired. NRC received three letters in response to this notification.

The U.S. Air Force's response (ADAMS Accession No. ML052270194) to the petition indicates that it has no data to support the contention that uranyl nitrate or UO_3 is a significant combustion product. The Air Force refers to Army research on DU munitions testing that does not indicate uranyl nitrate or UO_3 to be a significant combustion product when DU munitions have been fired. The Air Force attached a copy of a recent article from the *Health Physics Journal* to its response letter, which indicates that components of samples of dust resulting from DU munitions live fire consisted of the uranium oxides U_3O_7, U_3O_8, and UO_2. The Air Force also indicates that it is in full compliance with its Master Material License and with all applicable NRC regulations, and that its use of DU munitions does not pose any significant exposure hazard to either its employees or members of the general public.

The U.S. Navy, in its response (ADAMS Accession No. ML052270196), indicates that, before and after its use of DU munitions, health and environmental aspects were carefully considered. Its involvement in studies extends beyond the Navy to efforts involving the Department of Veterans Affairs and the Armed Forces Radiobiological Research Institute. The Navy's response references the thirty-three soldiers exposed to DU in the Gulf Wars as a result of friendly fire,

and the results of followup studies of these soldiers, which are consistent with the initial estimate of no significant health effects. The Navy also mentions studies by international organizations on the environmental impacts in Kosovo, Bosnia, and Iraq and the Gulf War, noting that these studies indicate that no widespread contamination and no current impact on the health of the general public or deployed personnel have been attributed to the use of DU munitions. The Navy states that the documentation submitted or referenced by the Petitioner fails to add information to what has already been published to date, that the allegations are based on the Petitioner's assumptions about chemical reactivity, and that putative resultant chemical components will cause undocumented human harm. Because of the speculative nature of the Petitioner's allegations and the lack of empirical data to support them, the Navy does not believe this petition raises safety concerns not previously addressed.

The U.S. Army addresses several issues in its response (ADAMS Accession No. ML052380089). The response cites the studies on human health effects of Gulf War veterans with imbedded DU from friendly fire. The studies' assessments conclude that there are no health effects attributable to DU on the group other than increased uranium in urine. The Army also references an Agency for Toxic Substances and Disease Registry ''Toxicology Profile for Uranium'' (Update, 1999), which indicates it is doubtful that human exposure to uranium compounds at or near a hazardous waste site could result in interference with normal reproduction. The Army also cites ''Capstone Aerosols Depleted Uranium Aerosol Doses and Risks: Summary of U.S. Assessments, October 2004,'' which indicates that recent studies could not determine if UO_3 was in aerosols of fired DU munitions because of overlapping X-ray diffraction patterns with U_3O_8. In that case, results were reported as a single quantity ''U_3O_8/UO_3.'' The Army response also addresses: (1) issues of cloud behavior of high concentration of aerosols; (2) the solubility of UO_3; (3) oxidation states of DU recovered in range and soil samples; (4) the Iraq cleanup of DU-contaminated sites and equipment; (5) environmental monitoring at Army ranges; and (6) the impact of uranyl nitrate on workers exposed to DU. The letter also includes a March 10, 2005, Fact Sheet on the ''U.S. Army Capstone Depleted Uranium Aerosol Study and Human Health Risk Assessment,'' and a list of study reports and publications.

F. NRC Evaluation of Petition Items

1. Petition Summary Item 1

The Petitioner requests that Licensees document when and where significant quantities of hexavalent uranium have been ingested, inhaled, or released to the environment, and that each incident be recognized as a Severity Level I violation.

NRC already requires documentation and reporting of releases and exposure to radioactive substances. NRC regulations specifically establish exposure limits for uranium, including hexavalent UO_3. *See* 10 C.F.R. § 20.1201(e), 10 C.F.R. § 20.1302(b), and Appendix B to Part 20. NRC requires monitoring of exposure of workers and members of the public to licensed material (Subpart F of Part 20). The regulations require the use of surveys, equipment, and instruments that are necessary to comply with the exposure-limit regulations of Part 20. Subpart C of Part 20 addresses occupational work limits, whereas Subpart D addresses the radiation dose limits for individual members of the public. Subpart L contains requirements for documentation and recordkeeping of radiation protection programs, surveys, and records of exposure to occupational workers, as well as individual members of the public. Subpart M contains reporting requirements for notification of incidents and exposure, radiation levels, and concentrations of radioactive material exceeding the constraints or limits. To the extent that the Petitioner requests, in item 1, that Licensees be subject to existing documentation requirements, the request is granted.

The request that NRC treat any releases of and exposures to UO_3 as violations is a challenge to exposure limits established by NRC regulations. Such a request is outside the scope of the 10 C.F.R. § 2.206 petition process and is not considered here. It is noted that, on May 6, 2005, the Petitioner filed a petition for rulemaking, requesting that NRC revise its Part 20 regulations that specify limits for ingestion and inhalation occupational values, effluent concentrations, and releases to sewers, for all heavy-metal radionuclides (including UO_3) with nonradiological, chemical toxicity hazards exceeding their radiological hazards, so that those limits properly reflect the hazards associated with reproductive toxicity, danger to organs, and all other known nonradiological aspects of heavy metal toxicity. The Petitioner's concerns regarding the adequacy of these exposure values in NRC regulations are being addressed in that rulemaking process. *See* the *Federal Register* on June 15, 2005 (70 Fed. Reg. 34,699).

The request that NRC classify all releases and exposures of UO_3 as Severity Level I violations is a challenge to the NRC Enforcement Policy. (*See* ''NRC Enforcement Policy,'' at *http://www.nrc.gov/what-we-do/regulatory/enforcement/enforc-pol.pdf.*) The NRC Enforcement Policy articulates the process used to assign severity levels for violations of NRC requirements. For example, Severity Level I violations involve levels of radiation exposure many times the limits specified in Part 20. (*See* NRC Enforcement Policy, Supplement IV.) To the extent that the petition challenges NRC policy regarding the dispositioning of violations involving exposures above regulatory limits and reporting of releases, the petition fails to raise a concern properly subject to 10 C.F.R. § 2.206. Therefore, Request 1 to recognize each incident of ingestion, inhalation, or release of hexavalent uranium to the environment as a Severity Level I violation is denied.

2. Petition Summary Item 2

The Petitioner requests that the Commission find the Licensees referred to in the petition, individually and jointly, willfully negligent for their multiple Severity Level I violations, because the Licensees never detected hexavalent uranium or recognized its danger, never attempted to detect it, and never recognized or assumed it was both hazardous and a product of combustion of DU munitions.

The Petitioner notes that two DU aerosol studies, performed by or for DU munition Licensees, did not find UO_3 when DU munitions were fired or subject to high-temperature fires. The Petitioner cites journal and textbook references that argue that UO_3 should be present in these cases, and that hexavalent uranium is of very serious importance in evaluating the safety of a uranium fire.

The Petitioner cites a November 1979 report entitled ''Characterization of Airborne Uranium from Test Firings of XM774 Ammunition,'' PNL-2944, as having no indication of the detection of UO_3. A Licensee had listed the report in its response to a June 2000 section 2.206 petition. On page 49, the 1979 report indicates that uranium at elevated temperatures can ignite and oxidize rapidly, and ''four oxides have been established — UO_2, U_4O_9, U_3O_8, and UO_3 . . . .'' The report describes the difficulty in certifying the presence or quantifying the amount of UO_3, because of the problem of overlap of x-ray diffraction profiles from U_3O_8 and UO_3 creating uncertainty in the evaluation of UO_3. The data in the report indicate the presence of U_3O_8 and UO_2, in the ratio of 75% to 25%, respectively.

That the Licensees have not detected hexavalent UO_3, or recognized the hazard from hexavalent UO_3 in licensed activities, claimed by the Petitioner, is not a violation of any NRC requirement. In addition, the Petitioner provides no basis for his assertion that the Licensees, individually or jointly, were willfully negligent in this regard. Accordingly, Request 2 is denied.

3. Petition Summary Item 3

The Petitioner requests the Commission find that, had the Commission known the true risk of pyrophoric uranium munitions, the Commission likely would not have issued the existing licenses without substantial and restrictive modification, if at all.

The Commission uses the recommendations of the ICRP and NCRP for the radiological bases of NRC regulations. These two scientific bodies collect, review, analyze, and develop information about protection against radiation, and have established levels to provide safety and prevent detrimental effects from exposure to radiation sources. The Commission, recognizing that the chemical toxicity of uranium may be more limiting than levels associated with radiological limits, has used the AGCIH recommendation as an additional limit to the annual radiation dose limit.

The inherent risk or hazard of a material is not the sole basis for decisions to grant a license or authorize its use. The license applicant must demonstrate that it can safely possess and use the authorized material while protecting public health and safety, and the environment, through acceptable design, procedure, construction, operation, maintenance, and quality assurance measures. At the time of a licensing review, the Commission considers the known hazards of the material being requested, and considers the current regulatory requirements. The review of a license application includes the overall ability of the licensee to meet all regulatory requirements and maintain public health and safety and protect the environment.

NRC licenses that authorize test-firing DU munitions contain certain restrictions and conditions, such as limited firing positions and locations, limiting test-firing to an enclosed environment, and implementation of monitoring programs. The restrictions control releases of material generated by test-firing. The monitoring programs verify the concentration levels of the facility's restricted and unrestricted areas, to ensure that exposures to those engaged in licensed activities and to members of the public, if they occur, are within allowable limits.

For radiological considerations, radionuclides have three different inhalation intake and air concentration allowable levels, based on the chemical form of the compound. These different classification levels reflect the retention time in the pulmonary region of the lung. This classification applies to a range of clearance half-times of less than 10 days for D, 10 to 100 days for W, and greater than 100 days for Y. UO_3 is classified in Part 20 as having a clearance class of W, whereas U_3O_8 has a clearance class of Y. For uranium-238, the predominant radionuclide in DU munitions, the Y class has more restrictive (smaller) allowable intake and concentration levels than the W class. Licensees that encounter both UO_3 and U_3O_8 in aerosols would classify the aerosols proportionately as class W and class Y, respectively, or, if the relative concentrations were not known, as all class Y, the most restrictive level, and would be in compliance when UO_3 is present, regardless of its relative concentration in the aerosol.

Moreover, with regard to chemical toxicity, NRC regulations limit the intake by an individual of any soluble uranium to 10 milligrams in a week, which is based on the ACGIH TLV of 0.2 milligram uranium per cubic meter of air. ACGIH determined this level based on the impact to the most sensitive organ to uranium toxicity in humans and animals, the kidney.

Based on a review of scientific literature by the Petitioner, and scientific and technical information otherwise available, NRC Staff is unable to conclude that the presence of UO_3 during test-firing of DU munitions represents a safety hazard greater or different than recognized when the DU munitions licenses were granted. That hazard is addressed by both the terms and conditions of the DU munitions licenses and by NRC regulations regarding dose limits and reporting exposures, radiation levels, and concentrations of radioactive material. NRC DU munition

licensees have not reported any incidents exceeding these limits in the activities relating to the testing of DU munitions, nor has NRC found any incidents of regulatory limits being exceeded in activities related to DU munitions.

The Petitioner has supplied no information that could provide a basis to conclude that licensed activities may have involved any violation of NRC requirements, or that the presence of UO_3 during test-firing of DU munitions represents a safety hazard greater or different than that recognized when the DU munitions licenses were granted. During review of DU munition license applications, the Commission considered the hazards and the applicable regulatory requirements, including requirements for acceptable design, procedures, construction, operation, maintenance, and quality assurance measures. Licenses were granted after NRC Staff determined that the authorized use would meet all NRC requirements. Accordingly, Request 3 is denied.

As indicated above, the Petitioner also submitted a petition for rulemaking on May 6, 2005, docketed by NRC on May 13, 2005, which requests that NRC amend 10 C.F.R. Part 20 to modify exposure and environmental limits of heavy metals (Docket No. PRM-20-26). NRC will consider and address the safety hazard of UO_3 in this rulemaking proceeding.

4. Petition Summary Item 4

The Petitioner asserts that a Licensee's statement, on January 27, 2005, that ''scientific consensus is that remediation of sites where DU munitions were used is generally unnecessary . . . ,'' intentionally and fraudulently misrepresented the safety of the hazardous licensed material contamination during the time of deliberations, concerning actions required at the Jefferson Proving Ground and other contaminated sites, in violation of NRC requirements.

Petitioner claims that wrongdoing occurred when General Richard Myers, Chairman of the United States Joint Chiefs of Staff, made a false statement, on January 27, 2005, in a letter to a non-NRC individual, that the scientific consensus is that remediation of sites where DU munitions are used is generally unnecessary. For a licensee statement to be treated as a false or inaccurate statement subject to NRC enforcement (i.e., a violation of section 186 of the Atomic Energy Act, of 10 C.F.R. § 40.9(a), the rule on completeness and accuracy; or of 10 C.F.R. § 40.10(a)(2), the deliberate misconduct rule), the statement must be made to NRC, and it must be material to NRC. However, the alleged statement was made to a third party and not to NRC. Even if the statement had been made to NRC, it would not be a violation of NRC requirements because it is not material. Because the alleged false statement is a mere opinion about a scientific consensus, it is not capable of influencing any NRC decision as to whether remediation of sites where DU munitions are used is necessary to protect public health and safety.

Accordingly, NRC finds that the alleged statements do not violate any NRC requirement, and Request 4 is denied.

5. Petition Summary Item 5

The Petitioner requests that NRC find the Licensee's submission of studies, provided in response to NRC queries regarding D. Rokke's 10 C.F.R. § 2.206 petition in October and November 2000, to be ''invalid,'' and that NRC require corrective action and corrective modification to licenses. Similarly, the Petitioner requests that the Commission find that the continued willful publication of invalid statements and assertions concerning the safe use of pyrophoric uranium munitions requires corrective modification of DU munition licenses to require the DU munition licensees to produce accurate, valid studies of the safety of pyrophoric uranium, and to publish these studies. The Petitioner requests that a $100,000-per-day fine should be imposed for any delay in making and publishing said studies, and that NRC suspend or revoke the licenses of those Licensees that delay compliance.

The studies to which the Petitioner refers are those that the Army submitted as authoritative, in June 2000, in response to a 10 C.F.R. § 2.206 petition. At the May 4, 2005, Petition Review Board meeting, the Petitioner referenced a 1979 research paper entitled ''Characterization of Airborne Uranium from Test Firings of XM774 Ammunition,'' PNL-2944, and a 1995 publication entitled ''Evaluation of Depleted Uranium Aerosol Data: Its Adequacy for Inhalation Modeling,'' PNL-10903. The Petitioner asserts that the Army used the test information to claim that there were no serious health and environmental consequences from DU munitions test-firing. The Petitioner considers the report invalid because he asserts that, through interpretation of other references, UO_3 should have been present. On page 49, the 1979 report indicates that uranium at elevated temperatures can ignite and oxidize rapidly, and four oxides have been established (i.e., UO_2, U_4O_9, U_3O_8, and UO_3). The report's findings, however, were that the aerosolized sample collected indicated 75% U_3O_8 and 25% UO_2, analyzed for relative abundance, semi-quantitatively, by x-ray diffraction analysis. No UO_3 was identified in the analysis. The 1995 publication abstract indicated that more than twenty of Battelle's studies and twenty more studies conducted by other researchers were reviewed. Although the researchers cited several areas as needing further research (e.g., resuspension and particle-size distribution), the researchers deemed the overall quality of the data, from the reviewed reports, adequate to conservatively estimate dispersion and health effects. The two studies were among numerous studies in a list enclosed with the Army's response to a 10 C.F.R. § 2.206 petition submitted in June 2000. The list was prefaced with encouragement to review the studies listed, along with other documents that could be viewed on certain Web sites.

Some DU munition licensees have been producing tests and studies (some performed by the licensees and others performed for the licensee by outside researchers) starting in the 1970s. Publications have been documented and/or published by government and nongovernment agencies, both internal and external to the Licensees, by institutes and academies, by advisory committees, and by specially appointed boards. A recent Army-sponsored endeavor (along with the Department of Defense) was the Capstone Aerosols ''Depleted Uranium Aerosol Doses and Risks: Summary of U.S. Assessments, October 2004,'' which can be viewed at *http://deploymentlink.osd.mil/du_library/du_capstone/index.pdf.*

To the extent this request intends to assert that submission of the allegedly invalid studies constitutes a violation of NRC requirements concerning the completeness and accuracy of information, the request is denied. The studies' conclusions constitute technical judgments or statements of opinion on a scientific matter, and are not subject to NRC requirements on completeness and accuracy of information. Mere disagreement with scientific conclusions or technical judgments of the studies in question does not render them violations of NRC requirements on completeness and accuracy of information. The Petitioner has identified no violation of NRC requirements concerning completeness and accuracy of information, or any deliberate misconduct. Therefore, Request 5 is denied.

To the extent this request is based on an assertion that licensed activities involving firing of DU munitions creates hazardous levels of UO_3 not previously recognized by NRC, this issue is addressed in the Petition Summary Item 3, above. As to the levels of UO_3 allowable, that issue is being addressed in the Petitioner's petition for rulemaking. (*See* the *Federal Register* on June 15, 2005 (70 Fed. Reg. 34,699)).

6. Petition Summary Item 6

The petition requests that the Commission modify all DU munition licenses, to require Licensees to accurately account for the risk, to health and safety, of any and all known forms of inhalation and ingestion exposure to pyrophoric uranium munition combustion products, and risks associated with hexavalent uranium release into the environment, risk ratios and their confidence intervals, under several sets of circumstances. It also requests that there be a fine of $100,000 per day for any delays in complying with the order.

NRC generally follows the basic radiation protection recommendations of the ICRP, and its U.S. counterpart, the NCRP, in formulating basic radiation protection standards. There are also scientific bodies that analyze data on sources and effects of radiation, and publish series of reports containing summaries of sources of radiation, and doses received by workers and members of the public. Reports of the United Nations Scientific Committee on the Effects of

Atomic Radiation and the National Academy of Sciences' Committee on the Biological Effects of Ionizing Radiation describe the potential health risks from these exposures. As stated above, in the case of uranium, NRC has used a chemical toxicity limit established by the ACGIH and endorsed by OSHA. NRC uses information concerning risk and impact on health from established scientific bodies dedicated to this subject.

NRC regulations impose dose limits based on generally accepted radiological risk analyses performed by the ICRP, and NCRP, and in the case of chemical toxicity of uranium, the ACGIH. The Petitioner's request is a challenge to NRC regulations that is not provided for under the 10 C.F.R. § 2.206 process. We note that the Petitioner filed a petition for rulemaking pursuant to 10 C.F.R. § 2.802 on May 6, 2005, requesting that NRC amend its regulations to modify the exposure and environmental limits of heavy-metal radionuclides, including UO_3. The Petitioner's concern regarding NRC dose limits for UO_3 will be addressed in the rulemaking. Therefore, Request 6 is denied.

7. Petition Summary Item 7

The Petitioner requests the Commission to order Licensees to determine the best, safest, and most effective medical therapies for uranium poison victims, and the best remediation of sites where munitions were burned or combustion products reached groundwater, plant, or animal life; to modify their licenses to include this information; to mitigate and remediate these sites; and to impose a $100,000-per-day fine for any delays in complying with the order.

The request to require Licensees to determine the best, safest, and most effective medical therapies for uranium poisoning is outside the scope of NRC jurisdiction. NRC has no authority to require medical treatment of any human malady, or to determine the best method of treatment.

NRC regulates the decontamination and decommissioning of nuclear facilities with the ultimate goal of license termination and release of a site for unrestricted use, including DU munition facilities. (*See* 10 C.F.R. Part 20, Subpart E, and 10 C.F.R. § 40.42.) One uranium munition licensee was released recently from a program providing special attention and oversight to decommissioning activities (Aberdeen Proving Ground, 1996), and one is currently in this decommissioning oversight program (Jefferson Proving Ground).

The Petitioner has identified no violations of NRC requirements concerning decontamination or decommissioning. To the extent Petitioner seeks remediation requirements that go beyond NRC requirements, the request does not constitute a request for enforcement action of current NRC requirements. Accordingly, for all the above reasons responding to this item, Request 7 is denied.

8. Petition Summary Item 8

The Petitioner requests that the Commission fine DU munition licensees $100,000 for each identified incident of all Severity Level I violations, each incident of gross negligence, each incident of willful misconduct, and each identified fraudulent assertion concerning the safety of DU munitions or related contamination, and suspend the DU licenses immediately until corrective actions for the above are completed.

The Staff has identified no violations of NRC requirements. Accordingly, Request 8 is denied.

G. Petitioner's and Licensees' Comments on the Proposed Director's Decision

Comments on the proposed Director's Decision were received from the Petitioner and two Licensees. The Petitioner's comments were received by e-mail on October 19, 2005. The Army e-mailed its comments on October 12, 2005, and the Air Force comments are dated October 17, 2005.

Both Licensees' comments indicated agreement with the decisions made in the proposed Director's Decision. Comments from the Petitioner contained four proposed amendments to the original petition, and seven additional questions, all of which are addressed below.

The first two Petitioner amendments request that DU munitions licenses be modified to require the Licensees to quantify information such as date, time, location, etc., and specifically to determine the amount of uranyl oxide gas produced during the use of pyrophoric uranium munitions. The third amendment requests modification of the licenses to require Licensees to determine the extent of both reproductive and developmental toxicity of typical uranium combustion product inhalation on several diverse animal species. The last amendment requests that the licenses be modified to require the Licensees to publish the estimates and determinations from the previous three amendments just listed above.

Title 10, Part 20, Subpart L (Records), and Subpart M (Reports) already require documentation, when appropriate, of estimated intakes of radionuclides, the dose assigned to an intake of radionuclides, and the dose to the organ receiving the highest total dose, among other information necessary to determine compliance with the safety requirements of 10 C.F.R. Part 20. In addition, reports must be made to NRC of exposures exceeding the allowable limits. The Petitioner has not identified any violation of these requirements. Current regulations do not require Licensees to quantify the dates, times, locations, quantities, and types of DU munitions used. The Petitioner's requests to require such documentation are in effect a challenge to NRC regulations, and are, therefore, outside the scope of the section 2.206 process. Nonetheless, Licensees have recorded data associated

with test-firing of DU munitions, beginning in the 1970s, acknowledged by the Petitioner, to the present, and most recently in the October 2004 Capstone Report (*http://deploymentlink.osd.mil/du_library/du_capstone/index.pdf*).

The third amendment requested Licensees to determine the extent of both reproductive and developmental toxicity from typical uranium combustion product inhalation on diverse species of animals, and the fourth amendment requested requiring the Licensees to publish the findings of these independent determinations. These requests are not for enforcement-related actions, and there is no NRC requirement to perform such studies. Petitioner's third and fourth amendment requests are in essence challenges to NRC regulations and therefore outside the scope of the section 2.206 process.

The Petitioner has also posed seven questions. The first two questions inquire about the documentation required of Licensees. The next three questions pertain to UO_3, as it relates to the lung clearance time, and its physical characteristics of being a vapor. The sixth question asks if the armed forces were aware of monomolecular gaseous UO_3 vapor, and the last question asks why NRC may not require a licensee to require medical treatment to remedy an accidental safety violation.

The first two questions posed in the Petitioner's comments to the proposed Director's Decision raise the same issues as raised by the first two amendment requests and by Request 1, and have been addressed above.

Questions three through five ask whether the clearance time of small particles of UO_3 is less than 10 days, whether UO_3 is a lung clearance class of D (days) or W (weeks), and whether UO_3 is produced in a gas vapor during uranium munition combustion. Questions three through five articulate at least a portion of the Petitioner's technical basis for his petition for rulemaking, and therefore are outside the scope of the section 2.206 process. These issues will be addressed along with the Petitioner's request for rulemaking already before the NRC.

Question six poses the question of whether the armed forces were aware that uranium-oxygen combustion produces monomolecular gaseous UO_3 gas vapor, before the Petitioner brought the issue to their attention in the petition. As stated in Petition Summary Item 2, a 1979 Pacific Northwest Laboratories test report indicates that UO_3 was established as one of the possible oxides resulting from uranium combustion at elevated temperatures. The statement that no UO_3 was in fact found is factually accurate and therefore cannot constitute a violation of NRC requirements concerning completeness and accuracy of information. Also, the Capstone Report, mentioned above, indicates that because of the difficulty of distinguishing x-ray diffraction lines of U_3O_8 and UO_3, the report provides data in the form of total U_3O_8/UO_3 quantities.

Question seven asked why NRC may not modify a license to require medical treatment for individuals harmed by licensed activity. NRC's authority to regulate the use of radioactive material is derived from the Atomic Energy Act (AEA) of

1954, as amended. The AEA defines the scope of the agency's mission and grants various powers to carry out that mission. In our system of government, regulatory powers are those that are granted, not those that have not been prohibited.

III. CONCLUSIONS

The Petitioner has introduced concerns about chemical components generated during the use of DU munitions subject to high temperatures, and has reached conclusions based on his assessment and interpretation of available scientific data. The Petitioner suggests that the hazard from the chemical toxicity of DU munition firing is greater than has been understood, and that DU munition licensees expose the public to risks that are not adequately addressed in current NRC regulations. The Petitioner also considers the amount of information available on the effects of uranium on the human reproductive system to be inadequate.

NRC Staff has considered this information, along with the Petitioner's requests, and has determined that several of the issues raised by the Petitioner do not fall under the enforcement-related corrective action provisions of the 10 C.F.R. § 2.206 process. For those issues that do fall under the enforcement-related corrective action provisions of section 2.206, the Petitioner has not shown that DU munition licensees have willfully or negligently ignored relevant studies addressing the use of DU munitions, or that the Licensees have created a condition hazardous to public health and safety. Nor has the Petitioner identified any violation of NRC requirements by DU munition licensees. The issue of the adequacy of NRC regulations addressing the hazards of hexavalent uranium is being addressed in the petition-for-rulemaking process.

Therefore, the NMSS Director has determined that the Petitioner's requests for Licensees to report incidents and overexposures to NRC, and to remediate their facilities in accordance with current regulations, have been, in effect, granted. The NMSS Director has also determined that Petitioner's requests for modification and/or revocation of DU munition licenses, and for the imposition of fines, are denied.

As provided in 10 C.F.R. § 2.206(c), a copy of this Director's Decision will be filed with the Secretary of the Commission for the Commission to review. As provided for by this regulation, this Decision will constitute the final action of the

Commission 25 days after the date of the Decision unless the Commission, on its own motion, institutes a review of this Decision within that time.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert C. Pierson, Acting Director
Office of Nuclear Material Safety
and Safeguards

Dated at Rockville, Maryland,
this 30th day of December 2005.

CASE NAME INDEX

AMERGEN ENERGY COMPANY, LLC
LICENSE TRANSFER; MEMORANDUM AND ORDER; Docket No. 50-289-LT-2; CLI-05-25, 62 NRC 572 (2005)
ATK TACTICAL SYSTEMS COMPANY, LLC
REQUEST FOR ACTION; DIRECTOR'S DECISION UNDER 10 C.F.R § 2.206; Docket No. 40-08850 (License No. SUB-1440); DD-05-8, 62 NRC 866 (2005)
BOILING-WATER REACTORS OF MARK I AND II DESIGN
REQUEST FOR ACTION; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206; DD-05-4, 62 NRC 782 (2005)
DEPARTMENT OF THE AIR FORCE
REQUEST FOR ACTION; DIRECTOR'S DECISION UNDER 10 C.F.R § 2.206; Docket No. 30-28641 (License No. 42-23539-01AF); DD-05-8, 62 NRC 866 (2005)
DEPARTMENT OF THE ARMY
REQUEST FOR ACTION; DIRECTOR'S DECISION UNDER 10 C.F.R § 2.206; Docket Nos. 40-06394, 40-07086, 40-08814, 40-08838, 40-07354, 40-08779, 40-08767 (License Nos. SMB-141, SUB-734, SMB-1411, SUB-1435, SUB-834, SUC-1391, SUC-1380); DD-05-8, 62 NRC 866 (2005)
DEPARTMENT OF THE NAVY
REQUEST FOR ACTION; DIRECTOR'S DECISION UNDER 10 C.F.R § 2.206; Docket No. 30-29462 (License No. 45-23645-01NA); DD-05-8, 62 NRC 866 (2005)
DOMINION NUCLEAR CONNECTICUT, INC.
LICENSE RENEWAL; MEMORANDUM AND ORDER; Docket Nos. 50-336-LR, 50-423-LR; CLI-05-18, 62 NRC 185 (2005); CLI-05-24, 62 NRC 551 (2005)
LICENSE RENEWAL; MEMORANDUM AND ORDER (Concerning Belated Intervention Petition); Docket Nos. 50-336-LR, 50-423-LR (ASLBP No. 05-837-01-LR); LBP-05-16, 62 NRC 56 (2005)
DOMINION NUCLEAR NORTH ANNA, LLC
EARLY SITE PERMIT; MEMORANDUM AND ORDER; Docket No. 52-007-ESP; CLI-05-17, 62 NRC 5 (2005)
DUKE COGEMA STONE & WEBSTER
MATERIALS LICENSE; ORDER (Terminating Proceeding); Docket No. 70-03098-ML (ASLBP No. 01-790-01-ML); LBP-05-15, 62 NRC 53 (2005)
ENTERGY NUCLEAR OPERATIONS, INC.
OPERATING LICENSE AMENDMENT; MEMORANDUM AND ORDER (Granting Motion To Dismiss NEC Contention 4); Docket No. 50-271-OLA (ASLBP No. 04-832-02-OLA); LBP-05-24, 62 NRC 429 (2005)
OPERATING LICENSE AMENDMENT; MEMORANDUM AND ORDER (Admitting Intervenor's New Contention); Docket No. 50-271-OLA (ASLBP No. 04-832-02-OLA); LBP-05-32, 62 NRC 813 (2005)
OPERATING LICENSE AMENDMENT; MEMORANDUM AND ORDER (Ruling on Deliberative Process Privilege Claims); Docket No. 50-271-OLA (ASLBP No. 04-832-02-OLA); LBP-05-33, 62 NRC 828 (2005)
REQUEST FOR ACTION; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206; Docket No. 50-271 (License No. DPR-28); DD-05-2, 62 NRC 389 (2005); DD-05-3, 62 NRC 765 (2005); DD-05-7, 62 NRC 862 (2005)

CASE NAME INDEX

ENTERGY NUCLEAR VERMONT YANKEE, LLC
- OPERATING LICENSE AMENDMENT; MEMORANDUM AND ORDER (Granting Motion To Dismiss NEC Contention 4); Docket No. 50-271-OLA (ASLBP No. 04-832-02-OLA); LBP-05-24, 62 NRC 429 (2005)
- OPERATING LICENSE AMENDMENT; MEMORANDUM AND ORDER (Admitting Intervenor's New Contention); Docket No. 50-271-OLA (ASLBP No. 04-832-02-OLA); LBP-05-32, 62 NRC 813 (2005)
- OPERATING LICENSE AMENDMENT; MEMORANDUM AND ORDER (Ruling on Deliberative Process Privilege Claims); Docket No. 50-271-OLA (ASLBP No. 04-832-02-OLA); LBP-05-33, 62 NRC 828 (2005)
- REQUEST FOR ACTION; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206; Docket No. 50-271 (License No. DPR-28); DD-05-2, 62 NRC 389 (2005); DD-05-3, 62 NRC 765 (2005); DD-05-7, 62 NRC 862 (2005)

EXELON GENERATION COMPANY, LLC
- EARLY SITE PERMIT; MEMORANDUM AND ORDER; Docket No. 52-007-ESP; CLI-05-17, 62 NRC 5 (2005); CLI-05-29, 62 NRC 801 (2005)
- EARLY SITE PERMIT; MEMORANDUM AND ORDER (Ruling on Motion for Summary Disposition Regarding Contention 3.1 and Petition for Admission of Amended Contention); Docket No. 52-007-ESP (ASLBP No. 04-821-01-ESP); LBP-05-19, 62 NRC 134 (2005)
- LICENSE TRANSFER; MEMORANDUM AND ORDER; Docket Nos. 50-277-LT, 50-278-LT; CLI-05-26, 62 NRC 577 (2005)
- REQUEST FOR ACTION; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206; Docket No. STN 50-454 (License No. NPF-37); DD-05-5, 62 NRC 791 (2005)

FIRSTENERGY NUCLEAR OPERATING COMPANY
- REQUEST FOR ACTION; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206; Docket Nos. 50-334, 50-412 (License Nos. DPR-66, NPF-73); DD-05-6, 62 NRC 855 (2005)

HYDRO RESOURCES, INC.
- MATERIALS LICENSE; PARTIAL INITIAL DECISION (Phase II Challenges to In Situ Leach Mining Materials License Regarding Groundwater Protection, Groundwater Restoration, and Surety Estimates); Docket No. 40-8968-ML (ASLBP No. 95-706-01-ML); LBP-05-17, 62 NRC 77 (2005)
- MATERIALS LICENSE; PARTIAL INITIAL DECISION (Phase II Cultural Resources Challenges to In Situ Leach Uranium Mining License); Docket No. 40-8968-ML (ASLBP No. 95-706-01-ML); LBP-05-26, 62 NRC 442 (2005)

LOUISIANA ENERGY SERVICES, L.P.
- MATERIALS LICENSE; MEMORANDUM AND ORDER; Docket No. 70-3103-ML; CLI-05-17, 62 NRC 5 (2005); CLI-05-20, 62 NRC 523 (2005); CLI-05-21, 62 NRC 538 (2005); CLI-05-28, 62 NRC 721 (2005)

NUCLEAR MANAGEMENT COMPANY, LLC
- LICENSE RENEWAL; MEMORANDUM AND ORDER (Ruling on Standing and Contention Admissibility); Docket No. 50-263-LR (ASLBP No. 05-841-02-LR); LBP-05-31, 62 NRC 735 (2005)

PRIVATE FUEL STORAGE, L.L.C.
- INDEPENDENT SPENT FUEL STORAGE INSTALLATION; MEMORANDUM AND ORDER; Docket No. 72-22-ISFSI; CLI-05-16, 62 NRC 1 (2005); CLI-05-19, 62 NRC 403 (2005); CLI-05-22, 62 NRC 542 (2005)
- INDEPENDENT SPENT FUEL STORAGE INSTALLATION; MEMORANDUM AND ORDER (Rulings on Summary Disposition Motion and Other Filings Relating to Remand from CLI-00-13); Docket No. 72-22-ISFSI (ASLBP No. 97-732-02-ISFSI); LBP-05-20, 62 NRC 187 (2005)
- INDEPENDENT SPENT FUEL STORAGE INSTALLATION; PARTIAL INITIAL DECISION (Contention Utah S, Decommissioning); Docket No. 72-22-ISFSI (ASLBP No. 97-732-02-ISFSI); LBP-05-22, 62 NRC 328 (2005)
- INDEPENDENT SPENT FUEL STORAGE INSTALLATION; MEMORANDUM AND ORDER (Granting in Part and Denying in Part Motion for Reconsideration and/or Clarification of Financial Qualifications Decisions); Docket No. 72-22-ISFSI (ASLBP No. 97-732-02-ISFSI); LBP-05-23, 62 NRC 373 (2005)

CASE NAME INDEX

INDEPENDENT SPENT FUEL STORAGE INSTALLATION; ORDER (Issuing Redacted Version of Final Partial Initial Decision); Docket No. 72-22-ISFSI (ASLBP No. 97-732-02-ISFSI); LBP-05-29, 62 NRC 635 (2005)

PSEG NUCLEAR, LLC

LICENSE TRANSFER; MEMORANDUM AND ORDER; Docket Nos. 50-277-LT, 50-278-LT; CLI-05-26, 62 NRC 577 (2005)

SYSTEM ENERGY RESOURCES, INC.

EARLY SITE PERMIT; MEMORANDUM AND ORDER; Docket No. 52-009-ESP; CLI-05-17, 62 NRC 5 (2005)

U.S. ARMY

MATERIALS LICENSE AMENDMENT; MEMORANDUM AND ORDER; Docket No. 40-8838-MLA-2; CLI-05-23, 62 NRC 546 (2005)

MATERIALS LICENSE AMENDMENT; MEMORANDUM AND ORDER (Referring to Commission Reinstatement of Prior Proceeding); Docket No. 40-8838-MLA-2 (ASLBP No. 04-819-04-MLA); LBP-05-25, 62 NRC 435 (2005)

MATERIALS LICENSE AMENDMENT; MEMORANDUM AND ORDER (Dismissing Proceeding as Moot); Docket No. 40-8838-MLA-2 (ASLBP No. 04-819-04-MLA); LBP-05-30, 62 NRC 733 (2005)

U.S. DEPARTMENT OF ENERGY

PRE-LICENSE APPLICATION MATTERS; MEMORANDUM AND ORDER; Docket No. PAPO-00; CLI-05-27, 62 NRC 715 (2005)

PRE-LICENSE APPLICATION MATTERS; MEMORANDUM AND ORDER (Ruling on State of Nevada's June 6, 2005 Motion To Compel); Docket No. PAPO-00 (ASLBP No. 04-829-01-PAPO) (NEV-03); LBP-05-27, 62 NRC 478 (2005)

USEC INC.

MATERIALS LICENSE; MEMORANDUM AND ORDER; Docket No. 70-7004; CLI-05-17, 62 NRC 5 (2005)

MATERIALS LICENSE; MEMORANDUM AND ORDER (Ruling on the Admissibility of Contentions); Docket No. 70-7004 (ASLBP No. 05-838-01-ML); LBP-05-28, 62 NRC 585 (2005)

YANKEE ATOMIC ELECTRIC COMPANY

OPERATING LICENSE AMENDMENT; MEMORANDUM AND ORDER (Approving Settlement Agreement and Terminating Proceeding); Docket No. 50-29-OLA (ASLBP No. 04-831-01-OLA) (License Termination Plan); LBP-05-18, 62 NRC 126 (2005)

LEGAL CITATIONS INDEX
CASES

Advanced Medical Systems, Inc. (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102 (1993)
summary disposition motions under Part 2 rules are held to the same standards by which the federal courts evaluate summary judgment motions; LBP-05-19, 62 NRC 180 (2005)

Advanced Medical Systems, Inc. (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993)
burdens on proponents and opponents of summary disposition are described; LBP-05-20, 62 NRC 228 (2005)

Alabama Power Co. (Joseph M. Farley Nuclear Plant, Units 1 and 2), ALAB-182, 7 AEC 210, 218 (1974)
a party must be accorded a meaningful opportunity to respond to arguments that are in the nature of affirmative defense; LBP-05-17, 62 NRC 88 n.4 (2005)

All Chemical Isotope Enrichment, Inc. (AlChemIE Facility-1 CPDF; Facility-2, Oliver Springs), ALAB-913, 29 NRC 267, 268 (1989)
boards should inquire whether the NRC Staff performed an adequate review and made findings with reasonable support in logic and fact; CLI-05-16, 62 NRC 39 (2005)

All Chemical Isotope Enrichment, Inc. (AlChemIE Facility-1 CPDF; Facility-2, Oliver Springs), LBP-89-5, 29 NRC 99, *aff'd,* ALAB-913, 29 NRC 267 (1989), *revocation of license sustained,* LBP-90-26, 32 NRC 30 (1990)
the Commission has faced few proceedings where the mandatory hearing requirement was applicable; CLI-05-16, 62 NRC 34 (2005)

Allied-General Nuclear Services (Barnwell Fuel Receiving and Storage Station), ALAB-328, 3 NRC 420, 421 (1976)
petitioner's interest in nuclear safety, no matter how longstanding the interest and no matter how qualified the organization is in evaluating the problem, is not sufficient by itself to render it adversely affected; LBP-05-31, 62 NRC 746 (2005)

Anderson v. Liberty Lobby, 477 U.S. 242, 248 (1986)
it is appropriate to look into the substance of a contention to the degree necessary to determine whether a genuine dispute about a factual issue exists, and whether, if one does, that dispute is indeed over a material fact; LBP-05-19, 62 NRC 180 (2005)

Appalachian Power Co. v. EPA, 208 F.3d 1015, 1028 (D.C. Cir. 2000)
Commission regulations cannot be altered absent a notice-and-comment rulemaking; CLI-05-16, 62 NRC 46 (2005)

Arizona Public Service Co. (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991)
a board may appropriately view petitioner's support for its contention in a light that is favorable to the petitioner, but petitioner must provide some support for the contention; LBP-05-28, 62 NRC 597 (2005); LBP-05-31, 62 NRC 749 (2005)
failure to present factual information and expert opinions necessary to adequately support a contention requires that the contention be rejected; LBP-05-28, 62 NRC 596 (2005); LBP-05-31, 62 NRC 749 (2005)

Arizona Public Service Co. (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155-56 (1991)
failure to comply with any of the pleading requirements is grounds for the dismissal of a contention; LBP-05-28, 62 NRC 595 (2005); LBP-05-31, 62 NRC 747 (2005)

NRC contention-pleading rules contemplate a clear statement of the basis for the contentions and the submission of supporting information and references to specific documents and sources that establish the validity of the contention; CLI-05-29, 62 NRC 808 (2005)

Arizona v. California, 460 U.S. 605, 618 (1983)
law of the case doctrine guides a tribunal's discretion, but it does not limit a tribunal's power; LBP-05-17, 62 NRC 87 (2005); LBP-05-26, 62 NRC 457 (2005)

Atglen-Susquehanna Trail v. Surface Transportation Board, 252 F.3d 246, 252-54 (3d Cir. 2001)
steps that a federal agency must take to comply with the National Historical Preservation Act are summarized; LBP-05-28, 62 NRC 627 n.159 (2005)

Baker v. Carr, 369 U.S. 186, 204 (1962)
in determining whether an intervention petitioner has demonstrated standing, a board must determine whether petitioner has demonstrated such a personal stake, on behalf of itself or its member(s), in the outcome of the proceeding as to show that a concrete adverseness exists that will sharpen the presentation of issues; LBP-05-31, 62 NRC 745 (2005)

Baltimore Gas & Electric Co. v. Natural Resources Defense Council, 462 U.S. 87, 97 (1983)
a federal agency is required to take a hard look at the environmental consequences of a major federal action before taking that action; LBP-05-26, 62 NRC 449 (2005)

Baltimore Gas & Electric Co. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 349 (1998)
licensing boards do not sit to supervise or direct NRC Staff regulatory reviews; CLI-05-24, 62 NRC 570 n.87 (2005)

Baltimore Gas & Electric Co. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), LBP-98-26, 48 NRC 232, 242-43, *aff'd,* CLI-98-25, 48 NRC 325, 349-50 (1998)
if petitioner believes there are deficiencies in a license application that it wishes to raise before the licensing board, it should identify them in a proposed contention and, if the contention is admitted and found meritorious, the license application will not be granted; LBP-05-31, 62 NRC 743 (2005)

Binks Manufacturing Co. v. National Presto Industries, Inc., 709 F.2d 1109, 1119-20 (7th Cir. 1983)
federal courts have adopted a test for dealing with the applicability of privilege to dual-purpose documents that are prepared for both litigation and nonlitigation purposes; LBP-05-27, 62 NRC 519 (2005)

Bose Corp. v. Consumers Union of the United States, Inc., 466 U.S. 485, 500 (1984)
the likelihood that a reviewing body will rely on the presumption of correctness of a trial court's factual determinations tends to increase when trial judges have lived with the controversy for weeks or months instead of just a few hours; CLI-05-19, 62 NRC 411 (2005)

Boston Edison Co. (Pilgrim Nuclear Power Station), LBP-85-24, 22 NRC 97, 98-99 (1985), *aff'd on other grounds,* ALAB-816, 22 NRC 461 (1985)
in ruling on claims of proximity standing, the Commission determines the radius beyond which it believes there is no longer an obvious potential for offsite consequences by taking into account the nature of the proposed action and the significance of the radioactive source; CLI-05-25, 62 NRC 575 (2005); CLI-05-26, 62 NRC 581 (2005)

Boston Edison Co. (Pilgrim Nuclear Power Station, Unit 2), LBP-74-63, 8 AEC 330, 352, *aff'd,* ALAB-238, 8 AEC 656 (1974)
in testing the adequacy of the Staff's review, boards have authority to ask clarifying questions of witnesses; CLI-05-16, 62 NRC 42 (2005)

Bowen v. Georgetown University Hospital, 488 U.S. 204, 208 (1988)
retroactivity is not favored in the law, and statutes and regulations will not be construed to have retroactive effect unless their language requires this result; LBP-05-26, 62 NRC 459, 460 (2005)

Branch v. Phillips Petroleum Co., 638 F.2d 873, 882-83 (5th Cir. 1981)
director of an agency's district office is of sufficient rank to assert the deliberative process privilege; LBP-05-33, 62 NRC 843 n.28 (2005)

Bullcreek v. NRC, 359 F.3d 536 (D.C. Cir. 2004)
state's theory that the NRC lacks authority to license a privately owned away-from-reactor spent fuel storage facility is rejected; LBP-05-29, 62 NRC 644 n.4 (2005)

LEGAL CITATIONS INDEX

CASES

Business and Professional People for the Public Interest v. Atomic Energy Commission, 502 F.2d 424, 428 (D.C. Cir. 1974)
the purpose of contention pleading requirements is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-05-28, 62 NRC 595 (2005); LBP-05-31, 62 NRC 747 (2005)

California v. Federal Energy Regulatory Commission, 329 F.3d 700, 707 (9th Cir. 2003)
publication in the *Federal Register* is legally sufficient notice to all interested or affected persons regardless of actual knowledge or hardship resulting from ignorance, except those who are legally entitled to personal notice; CLI-05-24, 62 NRC 565 n.60 (2005)

Calvert Cliffs' Coordinating Committee, Inc. v. AEC, 449 F.2d 1109 (D.C. Cir. 1971)
the Atomic Energy Commission viewed the terms ''determine'' and ''consider'' as synonymous; CLI-05-16, 62 NRC 37 n.57 (2005)

Calvert Cliffs' Coordinating Committee, Inc. v. AEC, 449 F.2d 1109, 1118 (D.C. Cir. 1971)
a hearing board must examine the Staff's environmental impact statement carefully to determine the adequacy of the Staff's review and must independently consider the final balance among conflicting factors that is struck in the Staff's recommendation; CLI-05-16, 62 NRC 44 (2005)
boards are to carefully probe NRC Staff findings by asking appropriate questions and by requiring supplemental information when necessary, and thereby undertake the kind of truly independent review that Congress anticipated when it established the mandatory hearing requirement; CLI-05-16, 62 NRC 40 (2005)
in testing the adequacy of the Staff's review, boards have authority to reject the proposed action; CLI-05-16, 62 NRC 42 (2005)
in uncontested proceedings, boards need not go over the same ground covered in the detailed environmental impact statement, but it must at least examine the statement carefully to determine whether the Staff review has been adequate and it must independently consider the final balance among conflicting factors that is struck in the Staff's recommendation; CLI-05-16, 62 NRC 45 (2005)

Carl Zeiss Stiftung v. V.E.B. Carl Zeiss, Jena, 40 F.R.D. 318, 324 (D.D.C. 1966)
the deliberative process privilege protects documents reflecting advisory opinions, recommendations, and deliberations comprising part of a process by which governmental decisions and policies are formulated; LBP-05-33, 62 NRC 843 (2005)

Carl Zeiss Stiftung v. V.E.B. Carl Zeiss, Jena, 40 F.R.D. 318, 327 n.33 (D.D.C. 1966)
although the substantive elements of each form of the executive privilege differ, the same procedural requirements generally apply to all forms of the executive privilege; LBP-05-33, 62 NRC 842 n.26 (2005)

Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), ALAB-490, 8 NRC 234, 243 (1978), *aff'd,* CLI-79-5, 9 NRC 607, 608 (1979)
in testing the adequacy of Staff's review, boards have authority to ask clarifying questions of witnesses; CLI-05-16, 62 NRC 42 (2005)

Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), ALAB-843, 24 NRC 200, 204 (1986)
an argument on appeal that is not adequately briefed need not be considered; LBP-05-17, 62 NRC 98 (2005)

Carolina Power and Light Co. (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), CLI-80-12, 11 NRC 514, 516 (1980)
as a general matter, the Commission's licensing boards and presiding officers have no authority to direct the Staff in the performance of its safety reviews; CLI-05-24, 62 NRC 570 n.87 (2005)

Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), CLI-01-11, 53 NRC 370, 383-86 (2001)
the word ''hearing'' can refer to any of a number of events including paper hearings accompanied by oral arguments; CLI-05-16, 62 NRC 43 (2005)

Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), CLI-01-11, 53 NRC 370, 393 (2001)
the most important of the stay requirements is irreparable harm; CLI-05-27, 62 NRC 718 (2005)

Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), LBP-78-4, 7 NRC 92, 144-46 (1978)
in testing the adequacy of Staff's review, boards have authority to set conditions on the approval of a construction permit; CLI-05-16, 62 NRC 42 (2005)

LEGAL CITATIONS INDEX

CASES

Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), LBP-01-9, 53 NRC 239, 250 (2001)
Federal Rules of Evidence are not binding and serve only as guidance for presiding officers in NRC proceedings; LBP-05-22, 62 NRC 357 (2005)
witnesses may be qualified as experts through academic training or relevant experience, or a combination of both; LBP-05-22, 62 NRC 358 (2005)

CFC Logistics, Inc., LBP-04-24, 60 NRC 475, 481 (2004)
applicant and Staff have the absolute right to end settlement discussions simply by advising the board at any point that they do not want them to continue; LBP-05-16, 62 NRC 72 n.14 (2004)

CFC Logistics, LBP-05-1, 61 NRC 45 (2005)
Commission policy strongly favors settlements, and settlements sometimes are possible in unlikely circumstances; LBP-05-29, 62 NRC 699 (2005)

Cheney v. United States District Court, 542 U.S. 367 (2004)
constitutional presidential communications privilege is a form of executive privilege; LBP-05-33, 62 NRC 842 n.26 (2005)

Cheney v. United States District Court, 542 U.S. 367, 389 (2004)
executive privilege is an extraordinary assertion of power not to be lightly invoked; LBP-05-33, 62 NRC 847 n.34 (2005)

Chevron, U.S.A., Inc. v. Natural Resources Defense Council, 467 U.S. 837, 842-43 (1984)
if the intent of Congress is clear, the court and the agency must give effect to the unambiguously expressed intent of Congress; LBP-05-27, 62 NRC 512 n.144 (2005)

Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 194-96 (D.C. Cir.), *cert. denied,* 502 U.S. 994 (1991)
an agency must reasonably consider the historic and cultural resources in an affected area, assess the impact of the proposed action and reasonable alternatives to that action, disseminate the relevant facts and assessments for public comment, and respond to legitimate concerns; LBP-05-26, 62 NRC 472 (2005)

Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 195 (D.C. Cir.), *cert. denied,* 502 U.S. 994 (1991)
agencies should accord substantial weight to the preferences of the applicant and/or sponsor; LBP-05-31, 62 NRC 753 (2005)
under NEPA, NRC need only discuss those alternatives that are reasonable and will bring about the ends of the proposed action; LBP-05-19, 62 NRC 156 (2005); LBP-05-28, 62 NRC 630 (2005); LBP-05-31, 62 NRC 753 (2005)
when the purpose is to accomplish one thing, it makes no sense to consider the alternative ways by which another thing might be achieved; CLI-05-29, 62 NRC 806 (2005)

Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 196 (D.C. Cir.), *cert. denied,* 502 U.S. 994 (1991)
an agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency's power would accomplish the goals of the agency's action, and the environmental impact statement would become a foreordained formality; LBP-05-19, 62 NRC 159 n.84 (2005)

Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 197 (D.C. Cir.), *cert. denied,* 502 U.S. 994 (1991)
where a federal agency is not the sponsor of the project, the federal government's consideration of alternatives may accord substantial weight to the preferences of the applicant in the design of the project; LBP-05-19, 62 NRC 156, 158 n.77 (2005)

Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 199 (D.C. Cir.), *cert. denied,* 502 U.S. 994 (1991)
an agency cannot redefine the goals of the proposal that arouses the call for action, but must evaluate the alternative ways of achieving its goals, shaped by the application at issue and by the function that the agency plays in the decisional process; CLI-05-29, 62 NRC 806 (2005)
in commanding agencies to discuss alternatives to a proposed action, NEPA refers to alternatives to the major federal actions significantly affecting the quality of the human environment, not to alternatives to the applicant's proposal; LBP-05-19, 62 NRC 157 (2005)

Citizens Awareness Network, Inc. v. United States, 391 F.3d 338 (1st Cir. 2004)
revised rules of practice must comply with the Administrative Procedure Act and NRC must furnish an adequate explanation for the changes; CLI-05-23, 62 NRC 548 n.11 (2005)

LEGAL CITATIONS INDEX

CASES

City of Carmel-by-the-Sea v. Department of Transportation, 123 F.3d 1142, 1155 (9th Cir. 1997)
an applicant is only required to consider feasible, nonspeculative alternatives to its proposed action; LBP-05-28, 62 NRC 629 (2005); LBP-05-31, 62 NRC 753 (2005)

City of Grapevine v. Department of Transportation, 17 F.3d 1502, 1506 (D.C. Cir. 1994)
where a federal agency is not the sponsor of the project, the federal government's consideration of alternatives may accord substantial weight to the preferences of the applicant in the design of the project; LBP-05-19, 62 NRC 156, 158 n.77 (2005)

City of Grapevine v. Department of Transportation, 17 F.3d 1502, 1508-09 (D.C. Cir.), *cert. denied,* 513 U.S. 1043 (1994)
claims that completion of the NHPA review process was required prior to agency approval of a project, where the agency's approval was conditioned on its subsequent completion of that process, are rejected; LBP-05-26, 62 NRC 462 (2005)

City of New York v. Department of Transportation, 715 F.2d 732, 743 (2d Cir. 1983)
an agency will not be permitted to narrow the objective of its action artificially and thereby circumvent the requirement that relevant alternatives be considered; LBP-05-19, 62 NRC 159 n.84 (2005)

City of West Chicago v. NRC, 701 F.2d 632, 647 (7th Cir. 1983)
the Commission may customize its rules of procedure for a particular case as long as there is adequate notice and no prejudice; CLI-05-23, 62 NRC 549 (2005)

Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Units 1 and 2), LBP-83-46, 18 NRC 218, 223 (1983)
to support a finding that there is a genuine issue of material fact, the factual record, when considered in its entirety, must be in doubt to such a degree that it is necessary to hold a hearing to aid in resolving the factual dispute; LBP-05-19, 62 NRC 180 (2005)

Coalition on Sensible Transportation, Inc. v. Dole, 826 F.2d 60, 66 (D.C. Cir. 1987)
boards must ensure that the agency has adequately considered and disclosed the environmental impact of its actions; LBP-05-19, 62 NRC 152 (2005)

Coastal Corp. v. Duncan, 86 F.R.D. 514, 517 (D. Del. 1980)
although the substantive elements of each form of the executive privilege differ, the same procedural requirements generally apply to all forms; LBP-05-33, 62 NRC 842 n.26 (2005)
in making claims of deliberative process privilege, relatively high-level personal review is required to deter governmental units from too freely claiming a privilege that is not to be lightly invoked by assuring that someone in a position of high authority could examine the materials involved from a vantage point involving both expertise and an overview-type perspective; LBP-05-33, 62 NRC 844 (2005)

Coastal States Gas Corp. v. Department of Energy, 617 F.2d 854, 866 (D.C. Cir. 1980)
deliberative process privilege is a subset of the executive privilege, which is unique to governmental agencies; LBP-05-33, 62 NRC 843 (2005)

Colorado Environmental Coalition v. Dombeck, 185 F.3d 1162 (10th Cir. 1989)
as a general principle, an agency cannot blindly adopt an applicant's articulated purpose; CLI-05-29, 62 NRC 807, 808 (2005)

Commonwealth Edison Co. (Braidwood Nuclear Power Station, Units 1 and 2) LBP-85-20, 21 NRC 1732, 1741 (1985)
petitioner's reference to the correspondence without explanation or analysis does not provide an adequate basis to support the admissibility of a contention; LBP-05-28, 62 NRC 613 (2005)

Commonwealth Edison Co. (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 189 (1999)
for a board to consider management character as an appropriate basis for adjudication in a licensing proceeding, there must be some direct and obvious relationship between the character issues and the licensing action in dispute; LBP-05-28, 62 NRC 618 (2005)

Commonwealth Edison Co. (Zion Nuclear Power Station, Units 1 and 2), CLI-00-5, 51 NRC 90, 98 (2000)
the Commission does not consider bare, unsupported assertions in its adjudications; CLI-05-16, 62 NRC 4 (2005)

LEGAL CITATIONS INDEX

CASES

Commonwealth Edison Co. (Zion Nuclear Power Station, Units 1 and 2), LBP-98-27, 48 NRC 271, 273-74 (1998), *aff'd,* CLI-99-4, 49 NRC 185, 191-93 (1999)
proximity standing is denied in a license amendment proceeding where a petitioner resided within 8.5-9 miles of the plant, his children's schooling was within 12 miles, and his own and/or his wife's regular errands and business trips took them to within 1 mile of the plant; CLI-05-26, 62 NRC 582 (2005)

Commonwealth Edison Co. (Zion Nuclear Power Station, Units 1 and 2), LBP-98-27, 48 NRC 271, 276 (1998), *aff'd,* CLI-99-4, 49 NRC 185, 191 (1999)
license amendments intending to reflect a plant's shutdown and defueled condition create no obvious potential for offsite consequences and thus proximity standing should not be granted; CLI-05-26, 62 NRC 582 (2005)

Commonwealth Edison Co. (Zion Nuclear Power Station, Units 1 and 2), LBP-98-27, 48 NRC 271, 277 (1998), *aff'd,* CLI-99-4, 49 NRC 185 (1999), *petition for review denied, Dienethal v. NRC,* 203 F.3d 52 (D.C. Cir. 2000) (table)
a board required a potential intervenor to show that the license amendments could plausibly lead to the offsite release of radioactive fission products from shutdown and defueled reactors; CLI-05-26, 62 NRC 583 (2005)
the initial question in ruling on claims of proximity standing is whether the kind of action at issue, when considered in light of the radioactive sources at the plant, justifies a presumption that the licensing action could plausibly lead to the offsite release of radioactive fission products from the reactors; CLI-05-26, 62 NRC 581 (2005)

Consolidated Edison Co. of New York (Indian Point, Unit 2), CLI-74-23, 7 AEC 947, 952 (1974)
the pertinent inquiry is whether the methodology for making post-hearing determinations is sufficiently detailed and prescriptive so that, assuming applicant complies with that methodology, the Commission has reasonable assurance that these determinations will not endanger public health and safety; LBP-05-17, 62 NRC 94 n.11 (2005)

Consolidated Edison Co. of New York (Indian Point, Units 1 and 2), CLI-01-19, 54 NRC 109 (2001)
proximity standing has been granted to intervenors in proceedings addressing the transfer of both operating authority and ownership interests; CLI-05-26, 62 NRC 582 (2005)

Consumers Power Co. (Big Rock Point Plant), LBP-84-32, 20 NRC 601, 639-52 (1984)
evaluating and weighing conservatisms whose impact can be reasonably estimated is a legitimate endeavor, and in such circumstances, the threshold probability for a credible accident might be even further increased; LBP-05-29, 62 NRC 695 (2005)

Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-123, 6 AEC 331, 335 (1973)
a licensing board's NEPA review must not be so intrusive or detailed as to involve the board in independent basic research or a duplication of the analysis previously performed by the Staff; CLI-05-16, 62 NRC 45 (2005)
in testing the adequacy of Staff's review, boards have authority to reject the proposed action; CLI-05-16, 62 NRC 42 (2005)

Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-123, 6 AEC 331, 335-36 (1973)
a board is required to make an independent review of Staff proposals and arrive at its conclusions on the basis of evidence in the record, including the Staff's final environmental impact statement; CLI-05-16, 62 NRC 45 (2005)

Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-458, 7 NRC 155, 162-63 (1978)
cost would only come into the analytical balancing if the environmental impact balancing indicates that a reasonable alternative is environmentally preferable to the proposed project; LBP-05-19, 62 NRC 179 (2005)

Consumers Power Co. (Palisades Nuclear Plant), LBP-79-20, 10 NRC 108, 112-13 (1979)
to demonstrate standing, petitioner must show that an adverse ruling by the board would result in an injury in fact to it or to its members; LBP-05-31, 62 NRC 746 (2005)

Criger v. Becton, 902 F.2d 1348, 1351 (8th Cir. 1990)
a delayed effective date on a regulation is evidence that cuts against its retroactive application; LBP-05-26, 62 NRC 460 (2005)

Cuomo v. NRC, 772 F.2d 972, 978 (D.C. Cir. 1985)
the Commission treats a stay as an extraordinary equitable remedy; CLI-05-27, 62 NRC 718 (2005)

LEGAL CITATIONS INDEX

CASES

Curators of the University of Missouri (TRUMP-S Project), CLI-95-1, 41 NRC 71, 102 & n.23 (1995)
acceding to intervenors' request to disregard law of the case in order to apply the new regulations retroactively would implicate due process concerns, contravene congressional and administrative intent, and ignore principles of regulatory construction; LBP-05-26, 62 NRC 460 (2005)

Curators of the University of Missouri (TRUMP-S Project), CLI-95-1, 41 NRC 71, 121 (1995)
adequacy of Staff's safety review is not relevant to the issue of whether a license application should be approved; LBP-05-20, 62 NRC 242 n.16 (2005); LBP-05-21, 62 NRC 312 (2005)
as a general matter, the Commission's licensing boards and presiding officers have no authority to direct the Staff in the performance of its safety reviews; CLI-05-24, 62 NRC 570 n.87 (2005); LBP-05-29, 62 NRC 711 (2005)

Curators of the University of Missouri (TRUMP-S Project), CLI-95-8, 41 NRC 386, 396 (1995)
in adjudications, the issue for decision is not whether the Staff performed well, but whether the license application raises health and safety concerns; LBP-05-21, 62 NRC 313 (2005)

Dahlberg v. Avis Rent A Car System, Inc., 92 F. Supp. 2d 1091, 1110 (D. Col. 2000)
judicial economy and efficiency are promoted by a rule that relieves the licensing board from the task of searching for intervenors' arguments by digging through the reams of paper that they have deposited, particularly when the intervenors did not consider the arguments sufficiently important to raise them in their written presentation; LBP-05-17, 62 NRC 99 n.14 (2005)

DeLong Equipment Co. v. Washington Mills Electro Minerals Corp., 990 F.2d 1186, 1196-97 (11th Cir. 1993)
under law of the case doctrine, changed circumstances include situations where intervening controlling authority makes reconsideration appropriate or substantially different evidence is adduced at a subsequent stage of the proceeding; LBP-05-17, 62 NRC 88 (2005); LBP-05-26, 62 NRC 457 (2005)

Department of Transportation v. Public Citizen, 541 U.S. 752, 767 (2004)
NEPA requires a reasonably close causal relationship between an alleged environmental effect and the alleged cause; CLI-05-28, 62 NRC 724 (2005)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001), *petition for reconsideration denied,* CLI-02-1, 55 NRC 1 (2002)
NRC contention-pleading rules are strict by design; CLI-05-29, 62 NRC 808 (2005); LBP-05-28, 62 NRC 595 (2005); LBP-05-31, 62 NRC 747 (2005)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 365 (2001), *petition for reconsideration denied,* CLI-02-1, 55 NRC 1 (2002)
for a board to consider management character as an appropriate basis for adjudication in a licensing proceeding, there must be some direct and obvious relationship between the character issues and the licensing action in dispute; LBP-05-28, 62 NRC 618 (2005)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 366 (2001), *petition for reconsideration denied,* CLI-02-1, 55 NRC 1 (2002)
allegations of management improprieties or poor integrity must be of more than historical interest, relating directly to the proposed licensing action; CLI-05-28, 62 NRC 725 (2005)
the Commission cannot allow admission of contentions premised on a general fear that a licensee cannot be trusted to follow regulations of any kind; LBP-05-28, 62 NRC 618 (2005)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-02-1, 55 NRC 1, 2 (2002)
reconsideration motions must be based on elaboration or refinement of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification; CLI-05-19, 62 NRC 410 (2005)

Dominion Nuclear Connecticut, Inc. (Millstone Power Station, Unit 3), CLI-02-22, 56 NRC 213, 228 (2002)
citation to past licensee violations issued by the NRC, without indicating any connection between these violations and licensee's current license application, does not provide support for a proposed contention; LBP-05-28, 62 NRC 602 (2005)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 218 (2003)
with limited exceptions, no rule or regulation of the Commission is subject to attack in any NRC adjudicatory proceeding; CLI-05-20, 62 NRC 536 (2005); LBP-05-28, 62 NRC 598 (2005); LBP-05-31, 62 NRC 751, 760 (2005)

LEGAL CITATIONS INDEX

CASES

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-12, 59 NRC 237, 239 n.3 (2004)
new section 2.323 is compared with old section 2.730, which did not contain a 10-day deadline for filing motions; LBP-05-33, 62 NRC 837 (2005)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 636 n.5 (2004)
the two requirements for a good cause showing, ''new information'' and ''promptly filed,'' are analogous to the requirements of ''information not previously available'' and ''submitted in a timely fashion''; LBP-05-19, 62 NRC 163 (2005)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 640 (2004)
emergency-planning issues fall outside the scope of a license renewal proceeding; CLI-05-24, 62 NRC 565 (2005); LBP-05-16, 62 NRC 70 (2004)
it makes no sense to spend the parties' and NRC's valuable resources litigating allegations of current deficiencies in a proceeding that is directed to future-oriented issues of aging; CLI-05-24, 62 NRC 561 (2005)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 640-41 (2004)
emergency planning issues are inapplicable to license renewals and therefore are outside the scope of the proceeding; LBP-05-31, 62 NRC 762 (2005)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 2), CLI-05-24, 62 NRC 551, 560-61 (2005)
emergency planning issues are inapplicable to license renewals and therefore are outside the scope of the proceeding; LBP-05-31, 62 NRC 762 (2005)

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), CLI-04-8, 59 NRC 113 (2004)
where circumstances have warranted, the Commission has applied revised Part 2 rules to proceedings noticed prior to the effective date; CLI-05-23, 62 NRC 549 (2005)

Duke Cogema Stone & Webster (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-01-13, 53 NRC 478, 479 (2001)
the word ''hearing'' can refer to any of a number of events including hearings employing a mixture of procedural rules; CLI-05-16, 62 NRC 43 (2005)

Duke Cogema Stone & Webster (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-01-13, 53 NRC 478, 484-86 (2001)
it is not uncommon in complex proceedings for the Commission to set forth an aggressive adjudication schedule; LBP-05-29, 62 NRC 709 n.9 (2005)

Duke Cogema Stone & Webster (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-9, 55 NRC 245, 249 (2002)
the NEPA cost-benefit analysis is postponed until the combined operating license phase of licensing; CLI-05-16, 62 NRC 47 (2005)

Duke Cogema Stone & Webster (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 422 (2001)
if a petitioner neglects to provide the requisite support for its contentions, the board should not make assumptions of fact that favor the petitioner, or supply information that is lacking; LBP-05-28, 62 NRC 597 (2005); LBP-05-31, 62 NRC 750 (2005)

Duke Energy Corp. (Catawba Nuclear Station, Units 1 and 2), CLI-04-6, 59 NRC 62, 72-73 (2004)
a party's belief that information is needed to provide context or background may have little or no bearing on a safeguards need-to-know determination because there is a strong interest in limiting access to safeguards and security information; LBP-05-27, 62 NRC 500 n.90 (2005)

Duke Energy Corp. (Catawba Nuclear Station, Units 1 and 2), CLI-04-6, 59 NRC 62, 74 (2004)
licensing boards do not sit to supervise or direct NRC Staff regulatory reviews; CLI-05-24, 62 NRC 570 n.87 (2005); LBP-05-29, 62 NRC 711 (2005)
since the nondisclosure of otherwise discoverable documents in an adjudicatory hearing is clearly an adjudicatory issue within the purview of the licensing board, the board is not intruding into the Staff's performance of its nonadjudicatory activities; LBP-05-33, 62 NRC 849 (2005)

LEGAL CITATIONS INDEX

CASES

Duke Energy Corp. (Catawba Nuclear Station, Units 1 and 2), CLI-04-11, 59 NRC 203, 209 (2004)
the Commission's customary practice is to accept Board-certified questions; CLI-05-18, 62 NRC 186 (2005); LBP-05-21, 62 NRC 539 (2005)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-01-20, 54 NRC 211, 214-16 (2001)
NRC policy of expediting the handling of license renewal applications rests on the lengthy lead time necessary to plan available sources of electricity; CLI-05-24, 62 NRC 567 (2005)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-01-27, 54 NRC 385, 391 (2001)
NRC policy of expediting the handling of license renewal applications rests on the lengthy lead time necessary to plan available sources of electricity; CLI-05-24, 62 NRC 567 (2005)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-26, 56 NRC 358, 364 (2002)
terrorism issues are insufficiently related to the effects of plant aging to be material to, or admissible in, a license renewal proceeding; LBP-05-31, 62 NRC 755 (2005)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-26, 56 NRC 358, 365 (2002)
an environmental impact statement is not an appropriate place to address terrorism issues; LBP-05-31, 62 NRC 756 (2005)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 (2002)
the reach of a contention necessarily hinges upon its terms coupled with its stated bases; LBP-05-19, 62 NRC 181 (2005); LBP-05-28, 62 NRC 595 (2005); LBP-05-31, 62 NRC 748 (2005)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 382 & n.42 (2002)
petitioners have an ironclad obligation to examine the publicly available documentary material pertaining to the facility in question with sufficient care to enable them to uncover any information that could serve as the foundation for a specific contention; LBP-05-32, 62 NRC 818 (2005)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 383 (2002)
the purpose of contention admission rules is to provide notice of the issues to be litigated, ensure the existence of at least minimal factual and legal foundation for the alleged claims, and ensure that there exists an actual genuine dispute on a material issue of law or fact; LBP-05-24, 62 NRC 431 (2005)
to raise specific challenges to new information, an intervenor must timely file a new or amended contention that addresses the factors in section 2.309; LBP-05-24, 62 NRC 431 (2005)
where a contention alleges the omission of particular information or an issue from an application, and the information is later supplied by the applicant, the contention is moot; LBP-05-24, 62 NRC 431, 432 (2005)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 386 (2002)
intervenors cannot seek to cure deficiencies of earlier pleadings by later introducing wholly new issues that could have been raised previously; CLI-05-20, 62 NRC 532 (2005)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-11, 58 NRC 130, 131 (2003)
NRC policy of expediting the handling of license renewal applications rests on the lengthy lead time necessary to plan available sources of electricity; CLI-05-24, 62 NRC 567 (2005)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 428 (2003)
mere notice pleading does not suffice for admission of contentions; CLI-05-29, 62 NRC 808 (2005)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 428-29 (2003)
NRC adjudicatory proceedings would prove endless if parties were free at hearing to introduce entirely new claims which they either originally opted not to make or which simply did not occur to them at the outset; CLI-05-28, 62 NRC 728 (2005)

LEGAL CITATIONS INDEX

CASES

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 431 (2003)
- an agency must reasonably consider the historic and cultural resources in an affected area, assess the impact of the proposed action and reasonable alternatives to that action, disseminate the relevant facts and assessments for public comment, and respond to legitimate concerns; LBP-05-26, 62 NRC 472 (2005)
- to litigate a NEPA claim, an intervenor must allege, with adequate support, that the NRC Staff has failed to take a ''hard look'' at significant environmental questions; LBP-05-26, 62 NRC 476 (2005)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), LBP-02-4, 55 NRC 49, 88, *rev'd on other grounds,* CLI-02-14, 55 NRC 278, *and aff'd and rev'd on other grounds,* CLI-02-17, 56 NRC 1 (2002)
- the impact of climate change on a nuclear power plant is not within the scope of a license renewal proceeding; LBP-05-31, 62 NRC 761 (2005)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999)
- the strict contention rule helps to ensure that full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions; LBP-05-16, 62 NRC 70 n.9 (2004)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 338 (1999)
- in NRC practice, contentions must be based on documents or other information available at the time the petition is filed, and petitioners must articulate at the outset the specific issues they wish to litigate; CLI-05-20, 62 NRC 526 (2005)
- petitioners may not wait for completion of Staff's review to formulate contentions, but instead must base their contentions on the filed license application; LBP-05-27, 62 NRC 500 n.90 (2005)

Duke Power Co. v. Carolina Environmental Study Group, Inc., 438 U.S. 59, 72 (1978)
- in determining whether an intervention petitioner has demonstrated standing, a board must determine whether petitioner has demonstrated such a personal stake, on behalf of itself or its member(s), in the outcome of the proceeding as to show that a concrete adverseness exists that will sharpen the presentation of issues; LBP-05-31, 62 NRC 745 (2005)

Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985)
- the scope of a proceeding is defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-05-28, 62 NRC 596 (2005); LBP-05-31, 62 NRC 748 (2005)

Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), LBP-75-34, 1 NRC 626, 675 (1975), *aff'd,* ALAB-355, 4 NRC 397 (1976)
- the special circumstances that allow a board to grant an exemption or a waiver of a rule must be unique to the facility rather than common to a large class of facilities; CLI-05-24, 62 NRC 560 (2005)

Duke Power Co. (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 474-75 (1982)
- a witness's expertise can be established by showing relevant knowledge, skill, experience, training, or education; LBP-05-21, 62 NRC 295-96 (2005)

Duke Power Co. (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982)
- there is no bright-line rule under the agency's Rules of Practice for evaluating a witness's expert qualifications; LBP-05-22, 62 NRC 357 (2005)

Duquesne Light Co. (Beaver Valley Power Station, Units 1 and 2), CLI-99-23, 50 NRC 21, 22 (1999)
- NRC Staff is directed to consider petitioner's late-filed contentions and supplemental filing as if they were written comments under 10 C.F.R. 2.1305; CLI-05-26, 62 NRC 584 (2005)

Duquesne Light Co. (Beaver Valley Power Station, Units 1 and 2), CLI-99-25, 50 NRC 224, 225 (1999)
- NRC Staff is directed to consider petitioner's late-filed contentions and supplemental filing as if they were written comments under 10 C.F.R. 2.1305; CLI-05-26, 62 NRC 584 (2005)

Duquesne Light Co. (Perry Nuclear Power Plant, Units 1 and 2), LBP-77-29, 5 NRC 1121 (1977)
- when faced with the ''contested'' versus ''uncontested'' question, NRC licensing boards have repeatedly distinguished between the contested and uncontested ''portion'' of proceedings; CLI-05-16, 62 NRC 35 (2005)

LEGAL CITATIONS INDEX

CASES

Duquesne Light Co. (Perry Nuclear Power Plant, Units 1 and 2), LBP-77-29, 5 NRC 1121, 1131-32 (1977)
in testing the adequacy of Staff's review, boards have authority to set conditions on the approval of the construction permit; CLI-05-16, 62 NRC 42 (2005)

Environmental Protection Agency v. Mink, 410 U.S. 73, 87-88 (1973)
the deliberative process privilege protects documents reflecting advisory opinions, recommendations, and deliberations comprising part of a process by which governmental decisions and policies are formulated, but does not extend to factual material severable from the deliberative context; LBP-05-33, 62 NRC 843 (2005)

Exelon Generation Co., LLC (Early Site Permit for the Clinton ESP Site), CLI-04-31, 60 NRC 461, 466 (2004)
routine rulings on contention admissibility are usually not occasions for the Commission to exercise its authority to step into ongoing licensing board proceedings and undertake interlocutory review; LBP-05-21, 62 NRC 539 (2005)

Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-05-9, 61 NRC 235, 236 (2005)
the Commission's customary practice is to accept Board-certified questions; CLI-05-18, 62 NRC 186 (2005)

Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5 (2005)
absent a statutory ''mandatory hearing'' requirement, NRC licensing boards sit to resolve discrete and timely raised contested issues only; CLI-05-19, 62 NRC 415 (2005)
licensing boards conducting mandatory hearings in early site permit cases must consider alternative sites, not alternative energy sources; CLI-05-29, 62 NRC 806 n.24 (2005)

Exelon Generation Co. (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-05-26, 62 NRC 577, 579-80 (2005)
involvement, both personal and through organizations, in numerous activities related to a facility does not support the necessary demonstration of injury that would qualify a petitioner for intervention in a license transfer proceeding; CLI-05-25, 62 NRC 574 (2005)

Exelon Generation Co. (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-05-26, 62 NRC 577, 582 n.22 (2005)
the Commission declines to consider a proximity standing argument presented for the first time in an untimely submitted supplemental filing; CLI-05-25, 62 NRC 575 (2005)

Exxon Corp. v. Department of Energy, 91 F.R.D. 26, 43-44 (D. Tex. 1981)
procedural requirements for deliberative process privilege are not met because no affidavit or other statement has been submitted by the Secretary of Energy or other agency official; LBP-05-33, 62 NRC 844 n.28 (2005)

Exxon Nuclear Co. (Nuclear Fuel Recovery and Recycling Center), ALAB-425, 6 NRC 199, 201 (1977)
the word ''hearing'' can refer to any of a number of events, including legislative hearings; CLI-05-16, 62 NRC 43 (2005)

Fansteel, Inc. (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003)
a contention will be inadmissible if petitioner has offered no tangible information, no experts, no substantive affidavits, but instead only bare assertions and speculation; LBP-05-31, 62 NRC 750, 752 (2005)
under the standards for contention admissibility, mere notice pleading is insufficient; LBP-05-28, 62 NRC 597 (2005)

Fansteel, Inc. (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 205 (2003)
providing any material or document as a basis for a contention, without setting forth an explanation of its significance, is inadequate to support the admission of the contention; LBP-05-28, 62 NRC 597, 601 (2005); LBP-05-31, 62 NRC 750 (2005)

Federal Open Market Committee v. Merril, 443 U.S. 340, 360 (1979)
documents that are protected by the deliberative process privilege do not lose their protected status after a final agency decision is made, because post-decisional release would have the same pernicious effect as predecisional release, that is, to inhibit the Staff from a thorough discussion of issues and options for fear of public airing of these internal discussions; LBP-05-33, 62 NRC 852 (2005)

LEGAL CITATIONS INDEX

CASES

Federal Trade Commission v. Standard Oil Co., 449 U.S. 232, 244 (1980)
litigation expense, even substantial and unrecoupable cost, does not constitute irreparable injury; CLI-05-27, 62 NRC 718 (2005)

Ferrell v. United States Department of Housing and Urban Development, 177 F.R.D. 425, 428 (N.D. Ill. 1998)
delegation of authority by HUD to an Assistant Secretary for Housing to assert privilege is allowed; LBP-05-33, 62 NRC 844 n.28 (2005)

Flast v. Cohen, 392 U.S. 83, 95 (1968)
pursuant to the case or controversy doctrine, a justiciable controversy must involve adverse parties representing a true clash of interests, and the questions raised must be presented in an adversary context and in a form historically viewed as capable of resolution through the judicial process; LBP-05-17, 62 NRC 91 (2005)

Florida Power & Light Co. (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329-30 (1989)
a license transfer raises no obvious potential for offsite consequences; CLI-05-25, 62 NRC 576 (2005)
in ruling on claims of proximity standing, the Commission determines the radius beyond which it believes there is no longer an obvious potential for offsite consequences; CLI-05-25, 62 NRC 575 (2005); CLI-05-26, 62 NRC 580 (2005)
the Commission declined to approve proximity standing in a reactor license amendment case where the change at issue was a worker-protection requirement with no obvious potential for offsite consequences; CLI-05-26, 62 NRC 583 (2005)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 7-12 (2001)
the impact of climate change on a nuclear power plant is not within the scope of a license renewal proceeding; LBP-05-31, 62 NRC 761 (2005)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 9-10 (2001)
emergency planning issues are not ordinarily to be considered in connection with a nuclear utility's request for a renewal of its reactor operating license; CLI-05-24, 62 NRC 561 n.38 (2005); LBP-05-16, 62 NRC 70 (2004)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 12 (2001)
a petitioner may pursue its concerns about current emergency plans by filing a petition for rulemaking; CLI-05-24, 62 NRC 562 (2005)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-85-29, 22 NRC 300, 305 (1985)
summary disposition is an appropriate mechanism for seeking the removal of portions of a filing or affidavit that contain technical arguments based on questionable competence; LBP-05-20, 62 NRC 228 (2005)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 146-47, *aff'd,* CLI-01-17, 54 NRC 3 (2001)
proximity standing rests on the presumption that an accident associated with the nuclear facility could adversely affect the health and safety of people working, living, or regularly engaging in activities offsite but within a certain distance of a facility; CLI-05-25, 62 NRC 575 (2005); CLI-05-26, 62 NRC 580 (2005)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 149, *aff'd,* CLI-01-17, 54 NRC 3 (2001)
in ruling on claims of proximity standing, the Commission determines the radius beyond which it believes there is no longer an obvious potential for offsite consequences by taking into account the nature of the proposed action and the significance of the radioactive source; CLI-05-25, 62 NRC 575 (2005); CLI-05-26, 62 NRC 581 (2005)

LEGAL CITATIONS INDEX

CASES

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 150, *aff'd,* CLI-01-17, 54 NRC 3 (2001)
a petitioner who lives within a certain radius of the regulated facility at issue need not expressly establish the traditional standing elements of injury, causation, or redressability; CLI-05-26, 62 NRC 580 (2005)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 163-64, *aff'd,* CLI-01-17, 54 NRC 3, 15-16 (2001)
radiation monitoring programs are subject to ongoing regulatory oversight, are not related to the detrimental effects of aging, and therefore are beyond the scope of a license renewal proceeding; LBP-05-31, 62 NRC 754 (2005)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 19 (2001)
emergency planning issues are inapplicable to license renewals and therefore are outside the scope of the proceeding; LBP-05-31, 62 NRC 762 (2005)

FMRI, Inc. [formerly *Fansteel, Inc.*] (Muskogee, Oklahoma Facility), LBP-04-8, 59 NRC 266 (2004)
a governmental entity has a clear responsibility to take whatever steps it deems necessary to ensure that the health and safety of its citizens are not put at undue risk; LBP-05-16, 62 NRC 74 (2004)

Fuel Safe Washington v. Federal Energy Regulation Commission, 389 F.3d 1313, 1323 (10th Cir. 2004)
NEPA does not require a detailed study of rejected alternatives, only a brief discussion of why an option was eliminated from further consideration; CLI-05-28, 62 NRC 728 (2005)

Fuel Safe Washington v. Federal Energy Regulation Commission, 389 F.3d 1313, 1323, 1324 (10th Cir. 2004)
NEPA does not require agencies to analyze impacts of alternatives that are speculative, remote, impractical, or not viable; CLI-05-28, 62 NRC 729 (2005)

Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-10, 42 NRC 1, 120 (1995)
for management integrity issues to be admissible, a contention must assert and demonstrate that the management personnel alleged to have acted improperly in the past are also going to be involved with the activity that is the subject of the current proceeding; LBP-05-28, 62 NRC 618 (2005)

Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995)
intervention petitions are construed in the light most favorable to the petitioner; LBP-05-31, 62 NRC 746 (2005)

Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116 (1995)
a license transfer raises no obvious potential for offsite consequences; CLI-05-25, 62 NRC 576 (2005)
in ruling on claims of proximity standing, the Commission determines the radius beyond which it believes there is no longer an obvious potential for offsite consequences; CLI-05-25, 62 NRC 575 (2005); CLI-05-26, 62 NRC 580 (2005)

Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116-17 (1995)
in ruling on claims of proximity standing, the Commission takes into account the nature of the proposed action and the significance of the radioactive source; CLI-05-25, 62 NRC 575 (2005); CLI-05-26, 62 NRC 581 (2005)

Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 120 (1995)
allegations of management improprieties must be of more than historical interest; LBP-05-28, 62 NRC 618 (2005)

Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 120-21 (1995)
if applicant's current management is unfit, it would be a cause to deny the license; LBP-05-28, 62 NRC 619 (2005)

Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 305, *vacated in part and remanded on other grounds,* CLI-95-10, 42 NRC 1, *and aff'd in part,* CLI-95-12, 42 NRC 111 (1995)
a petitioner is obliged to present the factual information and expert opinions necessary to adequately support its contention; LBP-05-28, 62 NRC 596 (2005); LBP-05-31, 62 NRC 749 (2005)
if a petitioner neglects to provide the requisite support for its contentions, the board should not make assumptions of fact that favor the petitioner, or supply information that is lacking; LBP-05-28, 62 NRC 597, 624 (2005); LBP-05-31, 62 NRC 750 (2005)
Georgia Power Co. (Vogtle Electric Generating Plant, Units 1 and 2), CLI-93-16, 38 NRC 25, 33 (1993)
proximity standing was granted in a license transfer proceeding where petitioner alleged that he could suffer harm from the transfer of operating authority to a company that allegedly lacked the character, competence, and integrity to safely operate the plant, and lacked the candor, truthfulness, and willingness to abide by the regulatory requirements necessary to operate a nuclear facility; CLI-05-25, 62 NRC 576 (2005)
Georgia Power Co. (Vogtle Electric Generating Plant, Units 1 and 2), CLI-93-16, 38 NRC 25, 36 (1993)
for management integrity issues to be admissible, a contention must assert and demonstrate that the management personnel alleged to have acted improperly in the past are also going to be involved with the activity that is the subject of the current proceeding; LBP-05-28, 62 NRC 618 (2005)
Georgia Power Co. (Vogtle Electric Generating Plant, Units 1 and 2), CLI-94-5, 39 NRC 190, 197 (1994)
a document is predecisional if it was prepared before the adoption of an agency decision and specifically prepared to assist the decisionmaker in arriving at his or her decision; LBP-05-33, 62 NRC 843 (2005)
deliberative process privilege applies only if the information is predecisional and deliberative; LBP-05-33, 62 NRC 843 (2005)
deliberative process privilege may be asserted in NRC proceedings; LBP-05-33, 62 NRC 842 (2005)
the deliberative process privilege available in NRC proceedings is closely related to Exemption 5 under the Freedom of Information Act; LBP-05-33, 62 NRC 843 (2005)
Georgia Power Co. (Vogtle Electric Generating Plant, Units 1 and 2), CLI-94-5, 39 NRC 190, 198 (1994)
a document does not need to contain a specific recommendation to be deliberative; LBP-05-33, 62 NRC 843 (2005)
a document is deliberative if it reflects a consultative process; LBP-05-33, 62 NRC 843 (2005)
a document reflecting a consultative process, and thus subject to deliberative process privilege, can include analysis, evaluations, recommendations, proposals, or suggestions reflecting the opinions of the writer rather than the final policy of the agency; LBP-05-33, 62 NRC 843 (2005)
if the factual material is so inextricably intertwined with the deliberative sections of a document that its disclosure would inevitably reveal agency deliberations, then the factual material need not be disclosed; LBP-05-33, 62 NRC 843 (2005)
Georgia Power Co. (Vogtle Electric Generating Plant, Units 1 and 2), LBP-93-5, 37 NRC 96 (1993), *aff'd,* CLI-93-16, 38 NRC 25 (1993)
the farthest distance for which NRC has ever granted proximity standing in a license transfer case was (with one exception) where a petitioner was living 35 miles from the plant 1 week per month; CLI-05-25, 62 NRC 576 (2005)
Georgia Power Co. (Vogtle Electric Generating Plant, Units 1 and 2), LBP-93-5, 37 NRC 96, 98, 106-07 (1993), *aff'd,* CLI-93-16, 38 NRC 25, 33 (1993)
proximity standing was approved for a petitioner living 35 miles from the plant 1 week per month who alleged that he could suffer harm from the transfer of operating authority to a company that lacked the character, competence, and integrity to safely operate the plant, and who lacked the candor, truthfulness, and willingness to abide by the regulatory requirements necessary to operate a nuclear facility; CLI-05-26, 62 NRC 583 (2005)
Georgia Power Co. (Vogtle Electric Generating Plant, Units 1 and 2), LBP-94-31, 40 NRC 137, 140 (1994)
a reconsideration motion must identify errors or deficiencies in the presiding officer's determination indicating that the questioned ruling overlooked or misapprehended some legal principle or decision that should have controlling effect or some critical factual information; LBP-05-23, 62 NRC 378 (2005)

LEGAL CITATIONS INDEX

CASES

GPU Nuclear, Inc. (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193 (2000)
all that is required under financial assurance license conditions is that applicant have funding fully ''committed'' prior to construction and that its ''prices'' be sufficient to cover facility O&M and decommissioning costs; LBP-05-20, 62 NRC 209 (2005)
proximity standing has been granted to intervenors in proceedings addressing the transfer of both operating authority and ownership interests; CLI-05-26, 62 NRC 582 (2005)
proximity standing is granted in license transfer proceeding to petitioner living 1 to 2 miles from the plant at issue; CLI-05-26, 62 NRC 583 (2005)

GPU Nuclear, Inc. (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 206 (2000)
intervenor requests for requirements more stringent than NRC regulations are denied; LBP-05-22, 62 NRC 363 (2005)

GPU Nuclear, Inc. (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 208 (2000)
a contention will be inadmissible if petitioner has offered no tangible information, no experts, no substantive affidavits, but instead only bare assertions and speculation; LBP-05-28, 62 NRC 597 (2005); LBP-05-31, 62 NRC 750, 752 (2005)
under the standards for contention admissibility, mere notice pleading is insufficient; LBP-05-28, 62 NRC 597 (2005)

Grand Central Partnership, Inc. v. Cuomo, 166 F.3d 473, 481 (2d Cir. 1999)
deliberative process privilege is encompassed within the executive privilege; LBP-05-33, 62 NRC 842 n.26 (2005)

Gulf States Utilities Co. (River Bend Station, Units 1 and 2), ALAB-444, 6 NRC 760, 774 n.26 (1977)
if only a portion of a proceeding's issues are in dispute, it makes no sense for a licensing board to proceed as if the entire adjudication is contested, with consequently greater demands on the parties' and the board's time and resources; CLI-05-16, 62 NRC 36 (2005)
with respect to contested issues, a board must resolve the controversy itself, as a de novo matter, but with respect to uncontested matters, the Board must merely decide whether the Staff's review has been adequate to support its findings; CLI-05-16, 62 NRC 36 (2005)

Headwaters, Inc. v. Bureau of Land Management, 914 F.2d 1174, 1181 (9th Cir. 1990)
NEPA does not require a separate analysis of alternatives that would have substantially similar consequences; CLI-05-28, 62 NRC 728 (2005)

Houston Lighting and Power Co. (South Texas Project, Units 1 and 2), LBP-79-10, 9 NRC 439, 448, *aff'd,* ALAB-549, 9 NRC 644 (1979)
to demonstrate standing, petitioner must establish that it, or its members, have a direct stake in the outcome of the proceeding that is greater than that of any other resident that consumes electricity generated by the plant; LBP-05-31, 62 NRC 746 (2005)

Hughes River Watershed Conservancy v. Johnson, 165 F.3d 283, 288 (4th Cir. 1999)
an agency must reasonably consider the historic and cultural resources in an affected area, assess the impact of the proposed action and reasonable alternatives to that action, disseminate the relevant facts and assessments for public comment, and respond to legitimate concerns; LBP-05-26, 62 NRC 472 (2005)

Hydro Resources, Inc. (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-00-8, 51 NRC 227, 240 (2000)
an intervenor should receive a meaningful hearing opportunity on all substantive issues material to the agency's licensing decision; LBP-05-17, 62 NRC 94 n.11 (2005)

Hydro Resources, Inc. (P.O. Box 15910, Rio Rancho, NM 87174), CLI-00-12, 52 NRC 1, 3 (2000)
on highly technical matters, where the affidavits or submissions of experts must be weighed, the Commission is generally disinclined to upset the findings and conclusions of a presiding officer; CLI-05-28, 62 NRC 723 (2005)

Hydro Resources, Inc. (P.O. Box 15910, Rio Rancho NM 87174), CLI-01-4, 53 NRC 31, 44 (2001)
NEPA prescribes the necessary process rather than requiring that NRC select any particular options; LBP-05-19, 62 NRC 157 (2005)

Hydro Resources, Inc. (P.O. Box 15910, Rio Rancho NM 87174), CLI-01-4, 53 NRC 31, 48 (2001)
NRC is not in the business of regulating the market strategies of licensees; LBP-05-19, 62 NRC 177 (2005)

LEGAL CITATIONS INDEX

CASES

Hydro Resources, Inc. (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 48-49 (2001)
NRC is not in the business of regulating the market strategies of licensees or determining whether market conditions warrant commencing operations; CLI-05-28, 62 NRC 726 (2005)

Hydro Resources, Inc. (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 53 (2001)
any board ''impacts'' findings will be added to the NEPA record of decision; CLI-05-20, 62 NRC 537 (2005)
in an adjudicatory hearing, the adjudicatory record and board decision and any Commission appellate decisions become, in effect, part of the final environmental impact statement; CLI-05-28, 62 NRC 731 (2005)
to the extent that any environmental findings by the board or the Commission differ from those in the final environmental impact statement, the FEIS is deemed modified by the decision; CLI-05-28, 62 NRC 731 (2005)

Hydro Resources, Inc. (P.O. Box 15910, Rio Rancho NM 87174), CLI-01-4, 53 NRC 31, 55 (2001)
NRC may take into account the economic goals of a project's sponsor; LBP-05-19, 62 NRC 156 (2005)
under NEPA, NRC need only discuss those alternatives that are reasonable and will bring about the ends of the proposed action; LBP-05-19, 62 NRC 156 (2005); LBP-05-31, 62 NRC 753 (2005)
when a project is sponsored by a private applicant, the federal agency may accord substantial weight to the preferences of the applicant and take into account the economic goals of the project's sponsor; LBP-05-19, 62 NRC 158 n.77 (2005)

Hydro Resources, Inc. (P.O. Box 15910, Rio Rancho NM 87174), CLI-01-4, 53 NRC 31, 55-56 (2001)
NRC cannot redefine the goals of the proposal that arouses the call for action, but must evaluate the alternative ways of achieving its goals, shaped by the application at issue and by the function that the agency plays in the decisional process; CLI-05-29, 62 NRC 806 (2005)
NRC should take into account the needs and goals of the parties involved in an application; LBP-05-19, 62 NRC 157 (2005)

Hydro Resources, Inc. (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 71 (2001)
although it is always possible to come up with more areas of discussion that conceivably could have been included in a licensing board's findings, this is not adequate to demonstrate the likelihood of clear error warranting plenary review; CLI-05-28, 62 NRC 723 (2005)

Hydro Resources, Inc. (P.O. Box 15910, Rio Rancho, NM 87174), CLI-04-33, 60 NRC 581, 591 (2004)
NRC adjudicatory proceedings would prove endless if parties were free at hearing to introduce entirely new claims which they either originally opted not to make or which simply did not occur to them at the outset; CLI-05-28, 62 NRC 728 (2005)

Immigration and Naturalization Service v. Lopez-Mendoza, 468 U.S. 1032, 1043 (1984)
in civil proceedings, an administrative official is permitted to draw a reasonable inference from the silence of one who is called upon to speak; LBP-05-26, 62 NRC 469 n.20 (2005)

In re Grand Jury Subpoena, 357 F.3d 900, 908-09 (9th Cir. 2004)
federal courts have adopted a test for dealing with the applicability of privilege to dual-purpose documents that are prepared for both litigation and nonlitigation purposes; LBP-05-27, 62 NRC 519 (2005)

In re Rainbow Magazine, Inc., 77 F.3d 278, 281 (9th Cir. 1996)
changed circumstances include a situation where intervening controlling authority makes reconsideration appropriate, or substantially different evidence is adduced at a subsequent stage of the proceeding; LBP-05-17, 62 NRC 88 (2005); LBP-05-26, 62 NRC 457 (2005)

In re Sealed Case, 121 F.3d 729, 737 (D.C. Cir. 1997)
the most frequent form of executive privilege raised in the judicial arena is the deliberative process privilege; LBP-05-33, 62 NRC 842 n.26 (2005)

In re Sealed Case, 856 F.2d 268, 271 (D.C. Cir. 1988)
responsibility for making claims of privilege is delegated by the head of the agency to the head of the relevant department because the privilege is to be asserted only after actual personal consideration of the document by the person making the decision; LBP-05-33, 62 NRC 844 (2005)

Inquiry into Three Mile Island Unit 2 Leak Rate Data Falsification, CLI-85-18, 22 NRC 877, 882 (1985)
the word ''hearing'' can refer to any of a number of events including legislative hearings; CLI-05-16, 62 NRC 43 (2005)

LEGAL CITATIONS INDEX

CASES

International Uranium (USA) Corp. (White Mesa Uranium Mill), CLI-98-6, 47 NRC 116, 117 (1998)
to demonstrate standing, petitioner must show that it, or any of its members, would suffer a concrete and particularized harm if the proposed action were permitted; LBP-05-31, 62 NRC 746 (2005)

International Uranium (USA) Corp. (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 252 (2001)
to demonstrate organizational standing, petitioner must show injury in fact to the interests of the organization itself as well as demonstrate a causal nexus and redressability; LBP-05-31, 62 NRC 744 (2005)

International Uranium (USA) Corp. (White Mesa Uranium Mill), LBP-01-8, 53 NRC 204, 207-08 (2001)
where a petitioner is proceeding *pro se,* and it is clear that neither the Staff nor applicant would have agreed to the relief requested in the motion, and it is unclear when the occurrence or circumstance from which the motion arose occurred, the board declines to dispose of the motion on procedural defects; LBP-05-31, 62 NRC 743 n.13, 758 (2005)

Jade Trading, LLC v. United States, 65 Fed. Cl. 487, 497 (2005)
privilege must be asserted by the head of the agency or the secretary of the cabinet department; LBP-05-33, 62 NRC 843 n.28 (2005)

Kansas Gas and Electric Co. (Wolf Creek Generating Station, Unit 1), ALAB-462, 7 NRC 320, 338 (1978)
when an initial decision has not yet issued, the proponent bears a heavy burden to show, among other things, that had the evidence been considered, a materially different result would likely have been obtained; LBP-05-20, 62 NRC 245 (2005)

Kerr v. United States District Court, 511 F.2d 192, 198 (9th Cir. 1975)
a claim of privilege was rejected because it was not invoked by any official of the agency; LBP-05-33, 62 NRC 843 n.28 (2005)

Kerr-McGee Chemical Corp. (West Chicago Rare Earths Facility), LBP-85-38, 22 NRC 604, 627 (1985)
an affidavit from the head of the relevant state agency is required to assert deliberative process privilege; LBP-05-33, 62 NRC 834, 844 n.28 (2005)

Landgraf v. USI Film Products, 511 U.S. 244, 266 (1994)
the presumption against the retroactive application of new laws, which seeks to limit the Sovereign's ability to make arbitrary changes in the law, finds expression in provisions of the Constitution, including the Due Process Clause, which protects the public's interest in fair notice and repose that may be compromised by retroactive legislation; LBP-05-26, 62 NRC 459 (2005)

Landgraf v. USI Film Products, 511 U.S. 244, 270 (1994)
inquiry into whether a regulation operates retroactively demands a commonsense, functional judgment about whether the new provision attaches new legal consequences to events completed before its enactment; LBP-05-26, 62 NRC 459 n.10 (2005)

Landry v. Federal Deposit Insurance Corp., 204 F.3d 1125, 1135 (D.C. Cir. 2000)
responsibility for making claims of privilege is delegated by the head of the agency to the head of the relevant department because the privilege is to be asserted only after actual personal consideration of the document by the person making the decision; LBP-05-33, 62 NRC 844 (2005)

Landry v. Federal Deposit Insurance Corp., 204 F.3d 1125, 1135-36 (D.C. Cir. 2000)
the head of an agency's regional division is of sufficient rank to assert the deliberative process privilege; LBP-05-33, 62 NRC 843 n.28 (2005)

Landry v. Federal Deposit Insurance Corp., 204 F.3d 1125, 1136 (D.C. Cir. 2000)
Staff's determination to assert the deliberative process privilege over a document must be made by a department head who has reviewed the document and made the decision; LBP-05-33, 62 NRC 849 n.38 (2005)

Limerick Ecology Action, Inc. v. NRC, 869 F.2d 719, 725 (3d Cir. 1989)
Council on Environmental Quality guidelines are not binding on an agency that has not expressly adopted them; LBP-05-19, 62 NRC 154 n.55 (2005)

Long Island Lighting Co. (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 836 (1973)
NEPA analyses are subject to a ''rule of reason'' which teaches that an environmental impact statement need only discuss the significant aspects of the probable environmental impact of the proposed agency action; LBP-05-19, 62 NRC 167 (2005)

Long Island Lighting Co. (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 851 (1973)
agency hearings are not the place to attempt to address concerns about terrorism; LBP-05-29, 62 NRC 656 n.33 (2005)

LEGAL CITATIONS INDEX

CASES

Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), ALAB-900, 28 NRC 275, 288 (1988)
although administrative history and other available guidance may be consulted for background information and the resolution of ambiguities in a regulation's language, its interpretation may not conflict with the plain meaning of the wording used in that regulation; LBP-05-27, 62 NRC 512 n.144 (2005)

Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-86-13, 24 NRC 22, 24-26 (1986)
intervenor's adamant opposition to the proposed nuclear power facility necessarily could be addressed only in the context of an adjudicatory proceeding in which the competing views of the parties to the proceeding could be aired and considered by a licensing board; LBP-05-16, 62 NRC 73 n.16 (2004)

Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-87-12, 26 NRC 383, 395 (1987)
the adequacy of regulations cannot be adjudicated in NRC proceedings; LBP-05-31, 62 NRC 755 (2005)

Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 65 (1991)
applicant is only required to consider feasible, nonspeculative alternatives to its proposed action; LBP-05-28, 62 NRC 629 (2005); LBP-05-31, 62 NRC 753 (2005)

Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), LBP-83-72, 18 NRC 1221, 1223 (1983)
an affidavit from the head of the relevant federal agency is required to assert deliberative process privilege; LBP-05-33, 62 NRC 834, 844 n.28 (2005)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-97-2, 45 NRC 3, 4 (1997)
a party may not base a reconsideration motion on new information or a new thesis; LBP-05-23, 62 NRC 379 (2005)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-97-2, 45 NRC 3, 4 & n. 1 (1997)
a properly supported reconsideration motion does not rely upon entirely new theses or arguments, except to the extent it attempts to address a presiding officer's ruling that could not reasonably have been anticipated; LBP-05-23, 62 NRC 378 (2005)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294 (1997)
license conditions could appropriately be used to establish compliance with the financial assurance requirements; LBP-05-21, 62 NRC 260 (2005)
the Commission has faced few proceedings where the mandatory hearing requirement was applicable; CLI-05-16, 62 NRC 34 (2005)
the financial assurance standard for Part 70 uranium enrichment facilities, rather than that for Part 50 power reactor facilities, is applicable to Part 72 ISFSI facilities; LBP-05-23, 62 NRC 376 (2005)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 309 (1997)
the Commission by license condition did not allow more than 70% debt financing of construction costs; LBP-05-20, 62 NRC 222 (2005)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77 (1998)
the Commission has faced few proceedings where the mandatory hearing requirement was applicable; CLI-05-16, 62 NRC 34 (2005)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 84 (1998)
the Board will not conduct a *de novo* review when making determinations about uncontested AEA safety matters and all nonbaseline NEPA issues; CLI-05-16, 62 NRC 38 n.58 (2005)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 84-86 (1998), *aff'g in part and rev'g in part* LBP-96-25, 44 NRC 331, 336-75 (1996)
although the Notice of Hearing lacked the ''weighing'' language, the Board nonetheless conducted a weighing and balancing; CLI-05-16, 62 NRC 46 (2005)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998)
a board's role under NEPA is to ensure that the agency has taken the requisite ''hard look'' at the potential environmental effects of the proposed action and its reasonable alternatives; LBP-05-19, 62 NRC 151, 156 (2005)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 88 (1998)
NEPA generally calls for some sort of a weighing of the environmental costs against the economic, technical, or other public benefits of a proposal; CLI-05-16, 62 NRC 46 (2005); LBP-05-19, 62 NRC 168 n.129 (2005)

LEGAL CITATIONS INDEX

CASES

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 89 (1998)
in an adjudicatory hearing, the adjudicatory record and board decision and any Commission appellate decisions become, in effect, part of the final environmental impact statement; CLI-05-28, 62 NRC 731 (2005)
NRC regulations direct the Staff to consider and weigh the environmental, technical, and other costs and benefits of a proposed action and alternatives; CLI-05-16, 62 NRC 46 (2005)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 91 (1998)
because the record before a board included numerous specific claims of beneficial market price effects, it was legitimate for the board to evaluate the claimed economic benefit; CLI-05-28, 62 NRC 725 (2005)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 94-95 (1998)
the Commission criticized the Board's overemphasis on price effects and noted the inherent unpredictability of future market conditions and prices; CLI-05-28, 62 NRC 726 (2005)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-5, 47 NRC 113 (1998)
although unreviewed Board decisions do not create binding legal precedent, it is prudent to vacate such decisions when Commission appellate review is cut short by mootness; CLI-05-22, 62 NRC 544 (2005)
the Commission has faced few proceedings where the mandatory hearing requirement was applicable; CLI-05-16, 62 NRC 34 (2005)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), LBP-91-41, 34 NRC 332, 338-39 (1991)
petitioner's reply to an answer to an intervention petition is not an appropriate manner by which to raise litigable issues; LBP-05-31, 62 NRC 743 (2005)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), LBP-96-25, 44 NRC 331, 355 (1996), *rev'd on other grounds,* CLI-97-15, 46 NRC 294 (1997)
a NEPA analysis often must rely upon imprecise and uncertain data, particularly when attempting to forecast future markets and technologies, and thus boards and parties must judge such forecasts on their reasonableness; LBP-05-19, 62 NRC 167 (2005)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), LBP-96-25, 44 NRC 331, 340-41 (1996), *aff'd in part and rev'd in part on other grounds,* CLI-98-3, 47 NRC 77 (1998)
NRC is required to consider alternatives before deciding whether to take major federal actions significantly affecting the environment, but the ''reasonable alternatives'' issue does not apply with full force to early site permit or ''partial'' construction permit cases; CLI-05-16, 62 NRC 48 (2005)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-04-3, 59 NRC 10, 12 n.1 (2004)
where circumstances have warranted, the Commission has applied revised Part 2 rules to proceedings noticed prior to the effective date; CLI-05-23, 62 NRC 549 (2005)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-04-3, 59 NRC 10, 15-16 (2004)
licensing boards are encouraged to promptly certify all novel legal or policy issues that would benefit from early Commission consideration; LBP-05-21, 62 NRC 539 (2005)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-04-3, 59 NRC 10, 16 (2004)
the Commission seeks to avoid unnecessary delays and endeavors to identify efficiencies to further reduce the time the agency needs to complete reviews and reach decisions in adjudicatory proceedings; CLI-05-16, 62 NRC 35 (2005)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-04-3, 59 NRC 10, 17 (2004)
boards should expeditiously decide legal and policy issues and follow the guidance in NRC policy statements; CLI-05-16, 62 NRC 35 (2005)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-04-25, 60 NRC 223, 224-25 (2004)
government entities seeking to litigate their own contentions are held to the same pleading rules as everyone else; CLI-05-24, 62 NRC 568 (2005)

Louisiana Energy Services, L.P. (National Enrichment Facility), LBP-04-14, 60 NRC 40, 55 (2004)
a contention will be inadmissible if the petitioner has offered no tangible information, no experts, no substantive affidavits, but instead only bare assertions and speculation; LBP-05-28, 62 NRC 601, 624 (2005); LBP-05-31, 62 NRC 750 (2005)

LEGAL CITATIONS INDEX

CASES

Louisiana Energy Services, L.P. (National Enrichment Facility), LBP-04-14, 60 NRC 40, 58 (2004), *aff'd in relevant part,* CLI-04-25, 60 NRC 223 (2004)
a board will fully consider intervention petitioner's reply to Staff's answer to its filing to the extent its substance legitimately amplifies issues first raised in the original petition; LBP-05-31, 62 NRC 742 (2005)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-04-25, 60 NRC 223 (2004)
intervention petitioners may not raise new issues in their reply briefs; LBP-05-31, 62 NRC 758 (2005)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-04-35, 60 NRC 619, 622-23 (2004)
at the contention admission stage, petitioner is not required to prove its case, but simply to provide sufficient alleged factual or legal bases to support the contention; LBP-05-32, 62 NRC 825 (2005)

Louisiana Power and Light Co. (Waterford Steam Electric Station, Unit 3), ALAB-732, 17 NRC 1076, 1112 (1983)
applying a less stringent ''sufficiency'' standard when examining uncontested issues merely recognizes the inherent limitations on a board's review of a matter not in contest and therefore not subject to the more intense scrutiny afforded by the adversarial process; CLI-05-16, 62 NRC 40 (2005)
different review functions are assigned to licensing boards depending on whether a case is contested or uncontested, with the former requiring the more intense scrutiny afforded by the adversarial process; CLI-05-16, 62 NRC 34 (2005)

Lujan v. Defenders of Wildlife, 504 U.S. 555, 560-61 (1992)
an intervention petitioner must demonstrate that an injury will be likely, as opposed to merely speculative, and will be redressed by a favorable decision; LBP-05-31, 62 NRC 744 (2005)

Lynce v. Mathis, 519 U.S. 433, 439 (1997)
the presumption against the retroactive application of new laws is an essential thread in the mantle of protection that the law affords the individual citizen; LBP-05-26, 62 NRC 459 (2005)

Lynce v. Mathis, 519 U.S. 433, 439-40 & n.12 (1997)
the presumption against the retroactive application of new laws, which seeks to limit the Sovereign's ability to make arbitrary changes in the law, finds expression in provisions of the Constitution, including the Due Process Clause, which protects the public's interest in fair notice and repose that may be compromised by retroactive legislation; LBP-05-26, 62 NRC 459 (2005)

Lyons v. Fisher, 888 F.2d 1071, 1075 (5th Cir. 1989), *cert. denied,* 495 U.S. 948 (1990)
under law of the case doctrine, changed circumstances include a situation where intervening controlling authority makes reconsideration appropriate, or substantially different evidence is adduced at a subsequent stage of the proceeding; LBP-05-17, 62 NRC 88 (2005); LBP-05-26, 62 NRC 457 (2005)

Maine v. United States Department of Interior, 298 F.3d 60, 68 (1st Cir. 2002)
federal courts have adopted a test for dealing with dual-purpose documents that are prepared for both litigation and nonlitigation purposes; LBP-05-27, 62 NRC 519 (2005)

Marriott International Resorts, L.P. v. United States, 61 Fed. Cl. 411, 417 (2004)
assertion of executive privilege requires familiarization with the documents involved and a determination that disclosure would significantly and adversely affect the agency's vital functions; LBP-05-33, 62 NRC 847 n.35 (2005)

Martin v. Hadix, 527 U.S. 343, 357-58 (1999)
inquiry into whether a regulation operates retroactively demands a commonsense, functional judgment about whether the new provision attaches new legal consequences to events completed before its enactment; LBP-05-26, 62 NRC 459 n.10 (2005)

Massachusetts v. NRC, 924 F.2d 311, 322 (D.C. Cir. 1991), *cert. denied,* 502 U.S. 899 (1991)
the Commission may authorize license issuance once the Board has issued its last partial initial decision, and notwithstanding intervenor's subsequent reconsideration motion and petition for review; CLI-05-19, 62 NRC 424 n.93 (2005)

Metropolitan Edison Co. v. People Against Nuclear Energy, 460 U.S. 760, 772-75 (1983)
the ''Megatons to Megawatts'' program is international in nature and does not have a proximate-cause connection to a proposed uranium enrichment facility sufficient to require a NEPA inquiry; CLI-05-28, 62 NRC 724 (2005)

Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), CLI-83-25, 18 NRC 327, 333 (1983)
a generalized grievance shared in substantially equal measure by all or a large class of citizens will not result in a distinct and palpable harm sufficient to support standing; LBP-05-31, 62 NRC 746 (2005)

Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), CLI-84-17, 20 NRC 801, 802-05 (1984)
the irreparable harm standard for grant of a stay cannot be relaxed even for the NRC Staff; CLI-05-27, 62 NRC 718 (2005)

Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), CLI-84-17, 20 NRC 801, 804 (1984)
litigation expense, even substantial and unrecoupable cost, does not constitute irreparable injury; CLI-05-27, 62 NRC 718 (2005)

Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), CLI-85-9, 21 NRC 1118, 1128 (1985)
personnel changes diminish significance of violations alleged to have occurred 6 years prior to current license application; LBP-05-28, 62 NRC 619 (2005)

Mid States Coalition for Progress v. Surface Transportation Board, 345 F.3d 520 (8th Cir. 2003)
National Historic Preservation Act regulations are applied prospectively; LBP-05-26, 62 NRC 460 (2005)

Mid States Coalition for Progress v. Surface Transportation Board, 345 F.3d 520, 550 (8th Cir. 2003)
a reasonably foreseeable significant adverse impact that was completely ignored and not analyzed is an example of clear error warranting plenary review; CLI-05-28, 62 NRC 723 (2005)

Mobil Oil Corp. v. Department of Energy, 102 F.R.D. 1, 6 (N.D.N.Y. 1983)
privilege claim invoked by a DOE staff attorney and not by the agency's head or a subordinate with high authority is rejected; LBP-05-33, 62 NRC 844 n.28 (2005)

Moore v. Charlotte-Mecklenburg Board of Education, 402 U.S. 47, 48 (1971)
an appeal is dismissed for lack of live controversy where both litigants desire precisely the same result; LBP-05-17, 62 NRC 91 (2005)

Morongo Band of Mission Indians v. Federal Aviation Administration, 161 F.3d 569, 576 (9th Cir. 1998)
the burden is on the party challenging agency action to offer feasible alternatives; LBP-05-19, 62 NRC 158 n.78 (2005)

Muckleshoot Indian Tribe v. United States Forest Service, 177 F.3d 800, 807 (9th Cir. 1999)
insensitivity to a tribal group does not, standing alone, violate the NHPA; LBP-05-26, 62 NRC 464 (2005)

National Labor Relations Board v. Bell Aerospace Co., 416 U.S. 267, 294 (1974)
the Commission may customize its rules of procedure for a particular case so long as there is adequate notice and no prejudice; CLI-05-23, 62 NRC 549 (2005)

National Labor Relations Board v. Sears, Roebuck & Co., 421 U.S. 132, 150 (1975)
the deliberative process privilege protects documents reflecting advisory opinions, recommendations, and deliberations comprising part of a process by which governmental decisions and policies are formulated; LBP-05-33, 62 NRC 843 (2005)

National Lawyers Guild v. Attorney General, 96 F.R.D. 390, 396 n.10 (S.D.N.Y. 1982)
although the substantive elements of each form of the executive privilege differ, the same procedural requirements generally apply to all forms; LBP-05-33, 62 NRC 842 n.26 (2005)

National Mining Association v. Department of Labor, 292 F.3d 849, 859 (D.C. Cir. 2002)
a congressional grant of rulemaking authority does not include the power to promulgate retroactive rules unless Congress expressly confers such power; LBP-05-26, 62 NRC 460 (2005)

National Mining Association v. Department of Labor, 292 F.3d 849, 860 (D.C. Cir. 2002)
if a new regulation is substantively inconsistent with a prior regulation or prior agency practice, it is retroactive as applied to pending claims; LBP-05-26, 62 NRC 459 n.10 (2005)

National Union Fire Insurance Co. v. Murray Sheet Metal Co., 967 F.2d 980, 984 (4th Cir. 1992)
federal courts have adopted a test for dealing with the applicability of privilege to dual-purpose documents that are prepared for both litigation and nonlitigation purposes; LBP-05-27, 62 NRC 519 (2005)

National Whistleblower Center v. NRC, 208 F.3d 256, 258 (D.C. Cir. 2000)
NRC may issue a case-specific order overriding procedural regulation; CLI-05-16, 62 NRC 46 (2005)

National Whistleblower Center v. NRC, 208 F.3d 256, 262 (D.C. Cir. 2000), *cert. denied,* 531 U.S. 1070 (2001)
the Commission may customize its rules of procedure for a particular case so long as there is adequate notice and no prejudice; CLI-05-23, 62 NRC 549 (2005)
National Wildlife Federation v. Hodel, 839 F.2d 694, 705 (D.C. Cir. 1988)
an intervention petitioner must demonstrate that the injury is traceable to the proposed action, and that a favorable decision in the proceeding is likely to redress the alleged injury; LBP-05-31, 62 NRC 744 (2005)
Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827, 834, 837 (D.C. Cir. 1972)
NEPA only requires an applicant to consider reasonable alternatives that are feasible and nonspeculative; LBP-05-31, 62 NRC 753 (2005)
Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827, 838 (D.C. Cir. 1972)
an environmental report need not evaluate the effects of alternatives that are only remote or speculative possibilities; LBP-05-28, 62 NRC 630 (2005)
New England Power Co. (NEP Units 1 and 2), LBP-78-9, 7 NRC 271, 280 (1978)
the decision whether to accept a license renewal application for docketing is made by the NRC Staff, and that decision is not subject to review by a licensing board; LBP-05-31, 62 NRC 743 (2005)
North Atlantic Energy Service Corp. (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 221 (1999)
in demonstrating financial qualifications, cost estimates must be reasonable; LBP-05-21, 62 NRC 272 (2005)
North Atlantic Energy Service Corp. (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 222 (1999)
the mere casting of doubt on some aspects of proposed funding plans is not by itself sufficient to defeat a finding of reasonable assurance; LBP-05-21, 62 NRC 298 (2005)
to demonstrate reasonable financial assurance, applicant must provide reasonable cost estimates based on plausible assumptions and forecasts, and estimates that rely on assumptions seriously at odds with governing realities will not be acceptable; LBP-05-21, 62 NRC 299 (2005)
Northeast Nuclear Energy Co. (Millstone Nuclear Power Station, Units 1, 2, and 3), CLI-00-18, 52 NRC 129 (2000)
in an indirect license transfer proceeding involving no change in the facility, its operation, licensees, personnel, or financing, proximity standing was denied to organizations claiming to have members living within 5-10 miles of the plant; CLI-05-25, 62 NRC 576 (2005)
Northeast Nuclear Energy Co. (Millstone Nuclear Power Station, Units 1, 2, and 3), CLI-00-18, 52 NRC 129, 131-32 (2000)
an indirect license transfer involving no change in the facility, its operation, licensees, personnel, or financing raises no obvious potential for offsite consequences; CLI-05-26, 62 NRC 581 (2005)
Northeast Nuclear Energy Co. (Millstone Nuclear Power Station, Unit 3), CLI-01-3, 53 NRC 22, 27 (2001)
an applicant cannot be required to prove that uncertain future events could never happen; LBP-05-20, 62 NRC 233, 240 (2005); LBP-05-21, 62 NRC 316 (2005)
Northeast Nuclear Energy Co. (Millstone Nuclear Power Station, Unit 2), LBP-92-26, 36 NRC 191 (1992)
the striking of a pleading is viewed as an appropriate sanction to educate a litigant on the need to comply with NRC Rules of Practice and directives from the board; LBP-05-28, 62 NRC 593 n.9 (2005); LBP-05-31, 62 NRC 743 n.13 (2005)
Northern California Power Agency v. NRC, 393 F.3d 223, 225-26 (D.C. Cir. 2004)
although unreviewed board decisions do not create binding legal precedent, it is prudent to vacate such decisions when Commission appellate review is cut short by mootness; CLI-05-22, 62 NRC 544 (2005)
Northern States Power Co. (Monticello Nuclear Generating Plant; Prairie Island Nuclear Generating Plant, Units 1 and 2; Prairie Island Independent Spent Fuel Storage Installation), CLI-00-14, 52 NRC 37 (2000)
a passthrough mechanism to cover O&M costs is an appropriate method for showing adequate financial assurance; LBP-05-23, 62 NRC 381 (2005)
Northern States Power Co. (Monticello Nuclear Generating Plant; Prairie Island Nuclear Generating Plant, Units 1 and 2; Prairie Island Independent Spent Fuel Storage Installation), CLI-00-14, 52 NRC 37, 47 (2000)
standing is granted to petitioners who live, work, or own property in the vicinity of the plants involved in license transfers; CLI-05-26, 62 NRC 583 (2005)

to plead representational standing, an organization must demonstrate how at least one of its members may be affected by the licensing action, must identify that member by name and address, and must show that the organization is authorized to request a hearing on behalf of that member; LBP-05-31, 62 NRC 744 (2005)

Northern States Power Co. (Monticello Nuclear Generating Plant; Prairie Island Nuclear Generating Plant, Units 1 and 2; Prairie Island Independent Spent Fuel Storage Installation), CLI-00-14, 52 NRC 37, 49-50 (2000)

a cost passthrough contract with state-regulated utility is adequate to establish financial qualifications; LBP-05-20, 62 NRC 202 (2005)

Northern States Power Co. (Monticello Nuclear Generating Plant; Prairie Island Nuclear Generating Plant, Units 1 and 2; Prairie Island Independent Spent Fuel Storage Installation), CLI-00-14, 52 NRC 37, 51 (2000)

passthrough provisions in applicant's customer service agreements are an acceptable means of providing assurance of financial qualification; LBP-05-21, 62 NRC 275, 301 (2005)

rate-regulated utilities are presumed to have reasonable assurance of receiving sufficient revenue to fund safe operation of plants; LBP-05-20, 62 NRC 234 (2005)

Northern States Power Co. (Monticello Nuclear Generating Plant; Prairie Island Nuclear Generating Plant, Units 1 and 2; Prairie Island Independent Spent Fuel Storage Installation), CLI-00-14, 52 NRC 37, 57 (2000)

the Commission has endorsed the limited liability corporation as a stand-alone applicant/licensee; LBP-05-20, 62 NRC 231 (2005)

Northrop Corp. v. McDonnell Douglas Corp., 751 F.2d 395, 405 n.11 (D.C. Cir. 1984)

a claim of deliberative process privilege is rejected because it was not made by the department head; LBP-05-33, 62 NRC 843 n.28 (2005)

Nuclear Energy Institute v. Environmental Protection Agency, 373 F.3d 1251, 1257, 1258 (2004)

the magnitude and importance of the national debate about how to address the presence of spent nuclear fuel at reactor sites are discussed; LBP-05-29, 62 NRC 696 (2005)

Nuclear Energy Institute v. Environmental Protection Agency, 373 F.3d 1251, 1268-73 (D.C. Cir. 2004)

EPA radiation-exposure standard for Yucca Mountain violates section 801 of the Energy Policy Act of 1992 because the regulatory 10,000-year compliance period was not based upon and consistent with the findings and recommendations of the National Academy of Sciences; LBP-05-27, 62 NRC 494 (2005)

Nuclear Engineering Co. (Sheffield, Illinois, Low-Level Radioactive Waste Disposal Site), ALAB-473, 7 NRC 737, 743 (1978)

in determining whether an intervention petitioner has demonstrated standing, a board must determine whether a cognizable interest of the petitioner organization, or of one of its specifically identified members, will be adversely affected if the proceeding has one outcome rather than another; LBP-05-31, 62 NRC 745 (2005)

Nuclear Engineering Co. (Sheffield, Illinois Low-Level Radioactive Waste Disposal Site), CLI-80-1, 11 NRC 1, 5 (1980)

a properly supported reconsideration motion does not rely upon previously presented arguments that have been rejected; LBP-05-23, 62 NRC 378 (2005)

Nuclear Fuel Services, Inc. (Erwin, Tennessee), LBP-04-2, 59 NRC 77, 79-80 (2004)

the Commission treats a stay as an extraordinary equitable remedy; CLI-05-27, 62 NRC 718 (2005)

Nuclear Fuel Services, Inc. (West Valley Reprocessing Plant), CLI-75-4, 1 NRC 273 (1975)

where a proceeding was still ongoing, the board granted a 9-month-late petition to intervene despite the absence of good cause for its tardiness; CLI-05-24, 62 NRC 564 (2005)

Nuclear Fuel Services, Inc. (West Valley Reprocessing Plant), CLI-75-4, 1 NRC 273 (1975), 1 NRC 208, 217, *aff'd*, LBP-75-4, 1 NRC 89 (1975)

Commission precedents leave room for belated interventions even where a petition is inexcusably late; LBP-05-16, 62 NRC 62, 65 (2004)

Ohio Edison Co. (Perry Nuclear Power Plant, Unit 1), LBP-92-32, 36 NRC 269, 284-85 (1992)

collateral estoppel bars relitigation in a subsequent proceeding of issues of law or fact that have been adjudicated in an earlier, different proceeding; LBP-05-17, 62 NRC 87 n.3 (2005)

LEGAL CITATIONS INDEX

CASES

Olmsted Citizens for a Better Community v. United States, 793 F.2d 201, 209 (8th Cir. 1986)
the burden is on the party challenging agency action to offer feasible alternatives; LBP-05-19, 62 NRC 158 n.78 (2005)

O'Shea v. Littleton, 414 U.S. 488, 494 (1974)
the demonstrated injury to an intervention petitioner must be both concrete and particularized, not conjectural or hypothetical; LBP-05-31, 62 NRC 744 (2005)

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-410, 5 NRC 1398, 1405 (1977)
when the qualifications of a witness are challenged, the party sponsoring the witness has the burden of demonstrating his or her expertise; LBP-05-21, 62 NRC 295 (2005); LBP-05-22, 62 NRC 357 (2005)

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-763, 19 NRC 571, 577, *review declined,* CLI-84-14, 20 NRC 285 (1984)
to prevail on each factual issue, applicant's position must be supported by a preponderance of the evidence; LBP-05-21, 62 NRC 297 (2005)

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-02-16, 55 NRC 317 (2002)
proximity standing has been granted to intervenors in proceedings addressing the transfer of both operating authority and ownership interests; CLI-05-26, 62 NRC 582 (2005)

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-02-16, 55 NRC 317, 347 (2002)
a governmental entity seeking intervenor status has proximity standing, given that its position is analogous to that of an individual living or working within a few miles of a plant whose license may be transferred; CLI-05-26, 62 NRC 583 n.29 (2005)

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-02-16, 55 NRC 317, 348-49 (2002)
NRC Staff is directed to consider petitioner's late-filed contentions and supplemental filing as if they were written comments under 10 C.F.R. 2.1305; CLI-05-26, 62 NRC 584 (2005)

Pacific Gas and Electric Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 453-57 (2002), *petition for review denied,* CLI-03-12, 58 NRC 185 (2003)
government entities seeking to litigate their own contentions are held to the same pleading rules as everyone else; CLI-05-24, 62 NRC 568 (2005)

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-03-2, 57 NRC 19, 29 (2003)
the Commission has long declined to assume that licensees will refuse to meet their obligations under their licenses or our regulations; LBP-05-17, 62 NRC 94 (2005)

Pacific Gas and Electric Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 426-27 (2002), *petition for review denied,* CLI-03-12, 58 NRC 185 (2003)
proximity standing rests on the presumption that an accident associated with the nuclear facility could adversely affect the health and safety of people working, living, or regularly engaging in activities offsite but within a certain distance of a facility; CLI-05-25, 62 NRC 575 (2005); CLI-05-26, 62 NRC 580 (2005)

Pacific Gas and Electric Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 427 (2002), *petition for review denied,* CLI-03-12, 58 NRC 185 (2003)
in ruling on claims of proximity standing, the Commission determines the radius beyond which it believes there is no longer an obvious potential for offsite consequences by taking into account the nature of the proposed action and the significance of the radioactive source; CLI-05-25, 62 NRC 575 (2005); CLI-05-26, 62 NRC 581 (2005)

Pacific Gas and Electric Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 439-41 (2002), *petition for review denied,* CLI-03-12, 58 NRC 185, 191 (2003)
for a contention to be material, there must be some significant link between the claimed deficiency and either the health and safety of the public or of the environment; LBP-05-28, 62 NRC 596 (2005); LBP-05-31, 62 NRC 749 (2005)

Petroleum Information Corp. v. United States Department of the Interior, 976 F.2d 1429, 1434 (D.C. Cir. 1992)
deliberative process privilege applies only if the information is predecisional and deliberative; LBP-05-33, 62 NRC 843 (2005)

Philadelphia Electric Co. (Limerick Generating Station, Units 1 and 2), LBP-83-25, 17 NRC 681, 687, *rev'd and remanded on other grounds,* ALAB-726, 17 NRC 755 (1983)
a reconsideration motion must identify errors or deficiencies in the presiding officer's determination, indicating that the questioned ruling overlooked or misapprehended some legal principle or decision that should have controlling effect or some critical factual information; LBP-05-23, 62 NRC 378-79 (2005)
a request to reexamine existing record material that may have been misunderstood or overlooked, or to clarify a matter that the party believes is unclear, is appropriate in a reconsideration motion; LBP-05-23, 62 NRC 379 (2005)

Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20 (1974)
the purpose of contention pleading requirements is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-05-28, 62 NRC 595 (2005); LBP-05-31, 62 NRC 747 (2005)

Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20-21 (1974)
any contention that amounts to an attack on applicable statutory requirements must be rejected by a licensing board as outside the scope of its proceeding; LBP-05-28, 62 NRC 598 (2005); LBP-05-31, 62 NRC 751 (2005)

Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 21 n.33 (1974), *aff'd on other grounds,* CLI-74-32, 8 AEC 217 (1974)
the NRC adjudicatory process is not the proper venue for the evaluation of a petitioner's personal view regarding the direction regulatory policy should take; LBP-05-28, 62 NRC 616 (2005); LBP-05-31, 62 NRC 751 (2005)

Pit River Tribe v. Bureau of Land Management, 306 F. Supp. 2d 929 (E.D. Cal. 2004)
National Historic Preservation Act regulations are applied prospectively; LBP-05-26, 62 NRC 460 (2005)

Portland Cement Association v. Ruckelshaus, 486 F.2d 375, 394 (D.C. Cir. 1973), *cert. denied sub nom. Portland Cement Corp. v. Administrator, Environmental Protection Agency,* 417 U.S. 921 (1974)
the materiality condition requires that petitioner show some significant link between a claimed deficiency and either the health and safety of the public or the environment; LBP-05-28, 62 NRC 596 (2005); LBP-05-31, 62 NRC 749 (2005)

Portland General Electric Co. (Pebble Springs Nuclear Plant, Units 1 and 2), ALAB-333, 3 NRC 804, 806 n.6 (1976), *aff'd,* CLI-76-27, 4 NRC 610, 614 (1976)
the Commission does not permit uninterested persons to intervene and play the role of ''private attorney general'' in NRC adjudications; CLI-05-26, 62 NRC 579 (2005)

Portland General Electric Co. (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289-90 n.6 (1979)
any contention that falls outside the specified scope of a proceeding must be rejected; LBP-05-28, 62 NRC 596 (2005); LBP-05-31, 62 NRC 748 (2005)

Power Authority of the State of New York (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-00-22, 52 NRC 266 (2000)
proximity standing has been granted to intervenors in proceedings addressing the transfer of both operating authority and ownership interests; CLI-05-26, 62 NRC 582 (2005)

Power Authority of the State of New York (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-00-22, 52 NRC 266, 295 (2000)
a governmental entity seeking intervenor status has proximity standing, given that its position is analogous to that of an individual living or working within a few miles of a plant whose license may be transferred; CLI-05-26, 62 NRC 583 (2005)

LEGAL CITATIONS INDEX

CASES

Power Authority of the State of New York (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-01-14, 53 NRC 488, 514 (2001)
a motion to strike is an appropriate mechanism for seeking the removal of information from a pleading or other submission that is irrelevant; LBP-05-20, 62 NRC 228 (2005)

Power Authority of the State of New York (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-01-14, 53 NRC 488, 558-59 (2001)
the Commission declines to address intervenor's proposed license conditions when the merits of its decommissioning funding assurance argument were rejected; LBP-05-22, 62 NRC 370 (2005)

Power Reactor Development Co., 1 AEC 1 (1956)
prior to April 1957, the AEC had granted only one request for hearing; CLI-05-16, 62 NRC 27 (2005)

Preservation Coalition, Inc. v. Pierce, 667 F.2d 851, 859 (9th Cir. 1982)
the ''hard look'' required by NEPA is not to be equated with completion of the National Historic Preservation Act review; LBP-05-26, 62 NRC 472 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 323 (1999)
to plead representational standing, an organization must show that one or more of its members would have standing to intervene on their own behalf, and that such a specifically identified member has authorized the organization to request a hearing on their behalf; LBP-05-31, 62 NRC 745 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999)
failure to comply with any of the pleading requirements is grounds for the dismissal of a contention; CLI-05-24, 62 NRC 567 (2005); LBP-05-28, 62 NRC 595 (2005); LBP-05-31, 62 NRC 747 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-00-2, 51 NRC 77 (2000)
where a petitioner's contention basis has been split into multiple contentions, an appeal of board rulings on some of the contentions may be unripe; CLI-05-20, 62 NRC 526 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-00-2, 51 NRC 77, 79 (2000)
although petitioner has shown no good cause for the tardiness of its petition for review, six of the remaining seven factors support consideration of the petition, with the remaining factor carrying little weight in the opposite direction; CLI-05-24, 62 NRC 558 (2005)
in deciding whether to admit late intervention petitions, the ''good cause'' factor is given the most weight; CLI-05-24, 62 NRC 564 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-01-12, 53 NRC 459, 461 (2001)
the Commission's customary practice is to accept Board-certified questions; CLI-05-18, 62 NRC 186 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-11, 55 NRC 260, 262-64 (2002)
the irreparable harm standard for grant of a stay cannot be relaxed even for the NRC Staff; CLI-05-27, 62 NRC 718 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-11, 55 NRC 260, 263 (2002)
litigation expense, even substantial and unrecoupable cost, does not constitute irreparable injury; CLI-05-27, 62 NRC 718 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340 (2002)
agency hearings are not the place to attempt to address concerns about terrorism; LBP-05-29, 62 NRC 656 n.33 (2005)
terrorism issues are insufficiently related to the effects of plant aging to be material to, or admissible in, a license renewal proceeding; LBP-05-31, 62 NRC 755 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 347 (2002)
NRC has no obligation under NEPA to consider terrorism; CLI-05-28, 62 NRC 724 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 349 & n.33 (2002)
the ''Megatons to Megawatts'' program is international in nature and does not have a proximate-cause connection to a proposed uranium enrichment facility sufficient to require a NEPA inquiry; CLI-05-28, 62 NRC 724 (2005)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-03-8, 58 NRC 11, 20 & n.25 (2003)
verification by the NRC Staff that a licensee complies with preapproved design or testing criteria is a highly technical inquiry not particularly suitable for hearing; LBP-05-17, 62 NRC 94 n.11 (2005)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-03-8, 58 NRC 11, 25-26 (2003)
although in some circumstances the Commission may choose to make its own *de novo* findings of fact, it generally does not exercise that authority where a licensing board has issued a plausible decision that rests on carefully rendered findings of fact; CLI-05-28, 62 NRC 723 (2005)
the standard of ''clear error'' for overturning a board factual finding is quite high; CLI-05-19, 62 NRC 411 (2005)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139 (2004)
petitioner does not have to prove its contention at the admissibility stage, but supporting material is subject to board scrutiny; LBP-05-28, 62 NRC 597 (2005); LBP-05-31, 62 NRC 749 (2005)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 145 (2004)
an agency's primary duty under NEPA is to take a hard look at environmental impacts, and determination of economic benefits and costs that are tangential to environmental consequences are within a wide area of agency discretion; CLI-05-28, 62 NRC 726 (2005)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-04-27, 61 NRC 145, 154 (2004)
an adjudicative body should, in a proper exercise of discretion, refrain from applying law of the case doctrine where changed circumstances or public interest factors dictate; LBP-05-17, 62 NRC 87-88 (2005); LBP-05-26, 62 NRC 457 (2005)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-05-1, 61 NRC 160, 174, 175 (2005)
absent a showing that the Board's fact-specific rulings were clearly erroneous, the Commission generally defers to the Board on matters of factual findings; CLI-05-16, 62 NRC 3 (2005)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-05-19, 62 NRC 403, 411 (2005)
on highly technical matters, where the affidavits or submissions of experts must be weighed, the Commission is generally disinclined to upset the findings and conclusions of a presiding officer; CLI-05-28, 62 NRC 723 (2005)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 173 *reconsideration granted in part on other grounds,* LBP-98-10, 47 NRC 288, *aff'd,* CLI-98-13, 48 NRC 26 (1998)
the Commission's regulations repeatedly provide for notice via the *Federal Register*; CLI-05-24, 62 NRC 565 (2005)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181 (1998)
offering bare conclusions without explaining the rationale behind those conclusions, and without even providing the documents on which they are purportedly based, provides no basis for admission of a contention; LBP-05-28, 62 NRC 612, 613 (2005)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 238, *reconsideration granted in part on other grounds,* LBP-98-10, 47 NRC 288, *aff'd,* CLI-98-13, 48 NRC 26 (1998)
for grant of an exemption or waiver of a rule, the movant must allege special circumstances that were not considered, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived; CLI-05-24, 62 NRC 560 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 238, 240 *reconsideration granted in part on other grounds,* LBP-98-10, 47 NRC 288, *aff'd,* CLI-98-13, 48 NRC 26 (1998)

the special circumstances that allow a board to grant an exemption or waiver of a rule must be unique to the facility rather than common to a large class of facilities; CLI-05-24, 62 NRC 560 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 239, *reconsideration granted in part on other grounds,* LBP-98-10, 47 NRC 288, *aff'd,* CLI-98-13, 48 NRC 26 (1998)

to grant an exemption or waiver of a rule, a board must first conclude that the rule's strict application would not serve the purposes for which it was adopted; CLI-05-24, 62 NRC 560 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-17, 48 NRC 69, 73-74 (1998)

pleading requirements for reconsideration motions are described; LBP-05-23, 62 NRC 379 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-99-39, 50 NRC 232, 237 (1999)

a request to reexamine existing record material that may have been misunderstood or overlooked, or to clarify a matter that the party believes is unclear, is appropriate in a reconsideration motion; LBP-05-23, 62 NRC 379 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-00-5, 51 NRC 64, 67-68 (2000)

a Board has the discretion to dismiss a contention for default where a sponsoring party does not pursue it at hearing; LBP-05-22, 62 NRC 366 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-00-14, 51 NRC 301, 310-11 (2000)

a late-filed motion for reconsideration requires good cause, as well as new information or changed circumstances; CLI-05-19, 62 NRC 409 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 509 (2001)

summary disposition should not be used to decide genuine issues of material fact that warrant an evidentiary hearing; LBP-05-19, 62 NRC 181 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-02-20, 56 NRC 169, 180 (2002)

summary disposition may be entered with respect to any or all matters in a proceeding if the motion, with any appropriate supporting material, shows that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-05-20, 62 NRC 228 (2005)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-03-4, 57 NRC 69, 82 (2003)

because the contention pleading rule provides the board no basis for excluding the intervenor from participation, the board need not consider whether there would be an inherent unfairness in limiting the intervenor to one drafting opportunity when applicants are regularly bestowed, both prior to and in the midst of the hearing process, many opportunities to amend their presentations; LBP-05-16, 62 NRC 70 n.10 (2004)

Process Gas Consumers Group v. U.S. Department of Agriculture, 694 F.2d 728, 769 (D.C. Cir. 1981)

NRC need only consider the range of alternatives reasonably related to the scope and goals of a proposed action; LBP-05-28, 62 NRC 630 (2005); LBP-05-31, 62 NRC 753 (2005)

Public Service Co. of Indiana (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-459, 7 NRC 179, 198-202 (1978)

member-customers of independent spent fuel storage facility are not required to be made co-applicants on the license; LBP-05-20, 62 NRC 231 (2005)

Public Service Co. of Indiana (Marble Hill Nuclear Generating Station, Units 1 and 2), CLI-80-10, 11 NRC 438, 439 (1980)

an academic interest in the matter, without a direct impact on the person or organization asserting it, does not confer standing; LBP-05-31, 62 NRC 744 (2005)

LEGAL CITATIONS INDEX

CASES

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 (1988), *aff'd sub nom. Massachusetts v. NRC,* 924 F.2d 311 (D.C. Cir. 1991), *cert. denied,* 502 U.S. 899 (1991)

a brief explanation of the basis for the contention helps define the scope of a contention; LBP-05-28, 62 NRC 595 (2005); LBP-05-31, 62 NRC 748 (2005)

the reach of a contention necessarily hinges upon its terms coupled with its stated bases; LBP-05-19, 62 NRC 181 (2005); LBP-05-28, 62 NRC 595 (2005)

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 n.11 (1988)

an intervenor is not free to change the focus of an admitted contention, at will, as the litigation progresses; LBP-05-22, 62 NRC 367 (2005)

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-77-8, 5 NRC 503, 526 (1977), *aff'd sub nom. New England Coalition on Nuclear Pollution v. NRC,* 582 F.2d 87, 95 (1st Cir. 1978)

in testing the adequacy of Staff's review, boards have authority to order that the record be supplemented; CLI-05-16, 62 NRC 42 (2005)

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-77-27, 6 NRC 715, 716 (1977)

the Commission treats a stay as an extraordinary equitable remedy; CLI-05-27, 62 NRC 718 (2005)

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-88-10, 28 NRC 573, 596-97 (1988), *reconsideration denied,* CLI-89-3, 29 NRC 234 & CLI-89-7, 29 NRC 395 (1989)

for a waiver request to be granted, all four factors in section 2.335(b) must be met; CLI-05-24, 62 NRC 560 (2005)

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-88-10, 28 NRC 573, 597 (1988), *reconsideration denied,* CLI-89-3, 29 NRC 234 & CLI-89-7, 29 NRC 395 (1989)

for grant of an exemption or waiver of a rule, the movant must allege special circumstances that were not considered, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived; CLI-05-24, 62 NRC 560 (2005)

the special circumstances that allow a board to grant an exemption or waiver of a rule must be unique to the facility rather than common to a large class of facilities; CLI-05-24, 62 NRC 560 (2005)

to grant an exemption or waiver of a rule, a board must first conclude that the rule's strict application would not serve the purposes for which it was adopted; CLI-05-24, 62 NRC 560 (2005)

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-88-10, 28 NRC 573, 597, 599 (1988), *reconsideration denied,* CLI-89-3, 29 NRC 234 & CLI-89-7, 29 NRC 395 (1989)

to be granted, a waiver of a regulation must be necessary to reach a significant safety problem; CLI-05-24, 62 NRC 560 (2005)

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-89-3, 29 NRC 234, 240-41 (1989)

a petitioner cannot satisfy the basis requirement for admissibility of a contention by mere references to voluminous documents without providing analysis demonstrating that they provide factual support for the proposed contention; LBP-05-28, 62 NRC 597, 607 (2005)

offering bare conclusions, without explaining the rationale behind those conclusions, and without even providing the documents on which they are purportedly based, provides no basis for admission of a contention; LBP-05-28, 62 NRC 612 (2005)

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-89-20, 30 NRC 231, 235 (1989)

for grant of an exemption or waiver of a rule, the movant must allege special circumstances that were not considered, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived; CLI-05-24, 62 NRC 560 (2005)

the special circumstances that allow a board to grant an exemption or waiver of a rule must be unique to the facility rather than common to a large class of facilities; CLI-05-24, 62 NRC 560 (2005)

to grant an exemption or waiver of a rule, a board must first conclude that the rule's strict application would not serve the purposes for which it was adopted; CLI-05-24, 62 NRC 560 (2005)

to be granted, a waiver of a regulation must be necessary to reach a significant safety problem; CLI-05-24, 62 NRC 560 (2005)

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-89-20, 30 NRC 231, 244 (1989)

even were there to have been a showing that the rationale of the financial qualifications rule was undercut, the Commission sees no indication that the licensee's financial uncertainty will overcome the substantial protections that the Commission has in place by means of all its requirements to prevent the occurrence of a significant nuclear safety problem; CLI-05-24, 62 NRC 563 n.50 (2005)

the vast majority of Commission rules have some basis in safety, but that does not mean that they are all suitable subjects for litigation in a license renewal proceeding; CLI-05-24, 62 NRC 560 (2005)

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), LBP-82-76, 16 NRC 1029, 1035 (1982)

any contention that amounts to an attack on applicable statutory requirements must be rejected by a licensing board as outside the scope of its proceeding; LBP-05-28, 62 NRC 598 (2005); LBP-05-31, 62 NRC 751 (2005)

the NRC adjudicatory process is not the proper venue for the evaluation of a petitioner's personal view regarding the direction regulatory policy should take; LBP-05-28, 62 NRC 598 (2005)

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), LBP-82-106, 16 NRC 1649, 1654 (1982)

determining whether a contention is adequately supported by a concise allegation of the facts or expert opinion is not a hearing on the merits; LBP-05-28, 62 NRC 596 (2005); LBP-05-31, 62 NRC 749 (2005)

Public Service Co. of Oklahoma (Black Fox Station, Units 1 and 2), LBP-78-26, 8 NRC 102, 161-62 (1978)

cost would only come into the analytical balancing if the environmental impact balancing indicates that a reasonable alternative is environmentally preferable to the proposed project; LBP-05-19, 62 NRC 179 (2005)

Public Service Electric and Gas Co. (Hope Creek Generating Station, Units 1 and 2), LBP-78-15, 7 NRC 642, 647 (1978)

where a witness testified that an event was possible, it was viewed as meaning that almost anything can be considered to be possible; LBP-05-22, 62 NRC 360 (2005)

Public Service Electric and Gas Co. (Hope Creek Generating Station, Units 1 and 2), LBP-78-15, 7 NRC 642, 647 n.8 (1978)

less weight has been accorded to the testimony of a witness acknowledging no expertise in a specific area; LBP-05-22, 62 NRC 357-58 (2005)

Public Service Electric and Gas Co. (Salem Nuclear Generating Station, Units 1 and 2), ALAB-136, 6 AEC 487, 489 (1973)

where a petitioner is proceeding *pro se,* and it is clear that neither the Staff nor applicant would have agreed to the relief requested in the motion, and it is unclear when the occurrence or circumstance from which the motion arose occurred, the board declines to dispose of the motion on procedural defects; LBP-05-31, 62 NRC 743 n.13, 758 (2005)

Pueblo of Sandia v. United States, 50 F.3d 856, 857 (10th Cir. 1995)

the Forest Service violated NHPA because its efforts to identify historic properties in a National Forest were neither reasonable nor in good faith; LBP-05-26, 62 NRC 468 (2005)

Pueblo of Sandia v. United States, 50 F.3d 856, 860-62 (10th Cir. 1995)

the Forest Service acted unreasonably when it failed to investigate the existence of traditional cultural properties, even though it knew that the affected sites probably contained such properties; LBP-05-26, 62 NRC 468 (2005)

Pueblo of Sandia v. United States, 50 F.3d 856, 862 (10th Cir. 1995)

the Forest Service failed to act in good faith because it improperly withheld material information from the State Historic Preservation Officer, thereby precluding him from making an informed decision regarding the existence of traditional cultural properties; LBP-05-26, 62 NRC 468-69 (2005)

Puget Sound Power and Light Co. (Skagit/Hanford Nuclear Power Project, Units 1 and 2), LBP-82-74, 16 NRC 981, 983 (1982)

an allegation of special interest without a showing of particularized harm is insufficient to establish standing; LBP-05-31, 62 NRC 746 (2005)

Resolution Trust Corp. v. Diamond, 773 F. Supp. 597, 602 (S.D.N.Y. 1991)
assertion of executive privilege requires the expertise of the agency head to exercise discretion to determine whether the public interest in confidentiality outweighs the public interest in disclosure; LBP-05-33, 62 NRC 847 n.35 (2005)
Rockwell International Corp. (Rocketdyne Division), ALAB-925, 30 NRC 709, 720 (1989) *aff'd,* CLI-90-5, 31 NRC 337 (1990)
the presiding officer quite properly has encouraged settlement between the licensee and the intervenors; CLI-05-24, 62 NRC 570 (2005)
Rockwell International Corp. (Rocketdyne Division), CLI-90-5, 31 NRC 337, 340 (1990)
any party's participation in the settlement process is voluntary; CLI-05-24, 62 NRC 570 (2005)
Rulemaking Hearing: Acceptance Criteria for Emergency Core Cooling Systems for Light-Water-Cooled Nuclear Power Reactors, CLI-73-9, 6 AEC 171, 172 (1973)
the word ''hearing'' can refer to any of a number of events, including legislative hearings; CLI-05-16, 62 NRC 43 (2005)
Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station), CLI-93-3, 37 NRC 135, 144-45 (1993)
in addition to a no-action alternative, only alternatives reasonably related to the goals of a proposed action, and the no-action alternative, need be considered; LBP-05-28, 62 NRC 629 (2005); LBP-05-31, 62 NRC 753 (2005)
Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station), CLI-93-12, 37 NRC 355, 362, 363 (1993)
a showing that Staff's environmental review documents significantly differ from the applicant's environmental report, although ordinarily sufficient to show good cause for lateness, is not by itself sufficient to make an environmental contention admissible, because the petitioner must still meet the other criteria in section 2.714(a); LBP-05-19, 62 NRC 162 n.93 (2005)
Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 247-48 (1993), *petition for review declined,* CLI-94-2, 39 NRC 91 (1994)
any contention that fails to directly controvert the application, or that mistakenly asserts that the application does not address a relevant issue, may be dismissed; LBP-05-28, 62 NRC 598 (2005); LBP-05-31, 62 NRC 750 (2005)
Safety Light Corp. (Bloomsburg Site Decontamination), CLI-92-9, 35 NRC 156, 159-60 & n.5 (1992)
law of the case doctrine establishes that the decision of an appellate tribunal should ordinarily be followed in all subsequent phases of that case, provided that the particular question in issue was actually decided or decided by necessary implication; LBP-05-17, 62 NRC 87 (2005); LBP-05-26, 62 NRC 457 (2005)
Save Our Wetlands, Inc. v. Sands, 711 F.2d 634, 642 (5th Cir. 1983)
an agency cannot reflexively rubber stamp a statement prepared by others; CLI-05-28, 62 NRC 730 (2005)
Senate of Puerto Rico v. United States Department of Justice, 823 F.2d 574, 586 n.42 (D.C. Cir. 1987)
federal courts have adopted a test for dealing with the applicability of privilege to dual-purpose documents that are documents are prepared for both litigation and nonlitigation purposes; LBP-05-27, 62 NRC 519 (2005)
Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site), CLI-94-9, 40 NRC 1, 6 (1994)
in ruling on stay applications, a board considers probability of success on the merits, harm to others, and the public interest, in addition to irreparable harm; CLI-05-27, 62 NRC 718 n.14 (2005)
Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site), CLI-94-9, 40 NRC 1, 6-7 (1994)
litigation expense, even substantial and unrecoupable cost, does not constitute irreparable injury; CLI-05-27, 62 NRC 718 (2005)
Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site), CLI-94-9, 40 NRC 1, 6-8 (1994)
the irreparable harm standard for grant of a stay cannot be relaxed even for the NRC Staff; CLI-05-27, 62 NRC 718 (2005)
Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site), CLI-94-9, 40 NRC 1, 7 (1994)
the most important of the stay requirements is irreparable harm; CLI-05-27, 62 NRC 718 (2005)

the presiding officer is willing to consider issuing a stay, despite an absence of real harm, even where the chance of reversal on appeal is overwhelming or a virtual certainty; CLI-05-27, 62 NRC 719 (2005)

Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site), CLI-94-9, 40 NRC 1, 8 (1994)
significant and difficult legal issues do not justify a stay in and of themselves, absent a strong showing of irreparable harm; CLI-05-27, 62 NRC 719 (2005)

Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 69 (1994)
in determining whether an intervention petitioner has demonstrated standing, a board must determine whether a cognizable interest of the petitioner organization, or of one of its specifically identified members, will be adversely affected if the proceeding has one outcome rather than another; LBP-05-31, 62 NRC 745 (2005)

Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 72 (1994)
to demonstrate standing, petitioner must show that it, or any of its members, would suffer a concrete and particularized harm if the proposed action were permitted; LBP-05-31, 62 NRC 746 (2005)

Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site), CLI-97-13, 46 NRC 195 (1997)
NRC has a longstanding policy favoring settlements; CLI-05-24, 62 NRC 568 (2005)

Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-17, 39 NRC 359, 361 (1994)
the Board's function in considering summary disposition is only to decide whether genuine issues of material fact remain between the parties, not to substantively seek to resolve material factual issues that do exist; LBP-05-19, 62 NRC 180 (2005)

Sequoyah Fuels Corp. (Gore, Oklahoma Site), LBP-04-30, 60 NRC 665 (2004)
a governmental entity has a clear responsibility to take whatever steps it deems necessary to ensure that the health and safety of its citizens are not put at undue risk; LBP-05-16, 62 NRC 74 (2004)

Shell Offshore Inc. v. Babbitt, 238 F.3d 622, 629-30 (5th Cir. 2001)
Commission regulations cannot be altered absent a notice-and-comment rulemaking; CLI-05-16, 62 NRC 46 (2005)

Sholly v. NRC, 651 F.2d 780, 791 n.27 (D.C. Cir. 1980), *vacated on other grounds,* 459 U.S. 1194 (1983)
the Atomic Energy Act itself nowhere prescribes the content of a mandatory hearing or prescribes the manner in which this hearing is to be run; CLI-05-16, 62 NRC 42 (2005)

Sierra Club v. Morton, 405 U.S. 727, 739 (1972)
petitioner's interest in nuclear safety, no matter how longstanding the interest and no matter how qualified the organization is in evaluating the problem, is not sufficient by itself to render it adversely affected; CLI-05-26, 62 NRC 580 (2005); LBP-05-31, 62 NRC 746 (2005)

Sierra Club v. Morton, 405 U.S. 727, 740 (1972)
to demonstrate standing, petitioner must establish that it, or its members, has a direct stake in the outcome of the proceeding that is greater than that of any other resident that consumes electricity generated by the plant; LBP-05-31, 62 NRC 746 (2005)

Simmons v. U.S. Army Corps of Engineers, 120 F.3d 664, 666 (7th Cir. 1997)
applicant cannot define a project so narrowly as to eliminate the NRC's consideration of the full range of reasonable alternatives in the environmental impact statement, but a rule of reason governs which alternatives an applicant must discuss in the environmental report and the extent to which it must discuss them; LBP-05-31, 62 NRC 753 (2005)

Simmons v. U.S. Army Corps of Engineers, 120 F.3d 664, 669 (7th Cir. 1997)
an agency need not rely on an applicant's definition of the project's purpose when defining reasonable alternatives; LBP-05-19, 62 NRC 158 n.77 (2005)
NEPA requires a look at alternative means to accomplish the general goal of an action, but the inquiry need not go far afield from the original proposal; CLI-05-29, 62 NRC 807 (2005)

Skull Valley Band of Goshute Indians v. Nielson, 376 F.3d 1223 (Aug. 4, 2004), *aff'g Skull Valley Band of Goshute Indians v. Leavitt,* 215 F. Supp. 2d 1232 (D. Utah 2002), *petition for cert. sub nom. Nielson v. Private Fuel Storage,* No. 04-575 (*filed* Oct. 28, 2004)
state's theory that the NRC lacks authority to license a privately owned away-from-reactor spent fuel storage facility is rejected; LBP-05-29, 62 NRC 644 n.4 (2005)

LEGAL CITATIONS INDEX

CASES

Skull Valley Band of Goshute Indians v. Nielson, 376 F.3d 1223, 1254 (2004)
intervenors and other parties have the fundamental right of fair treatment; LBP-05-29, 62 NRC 698 (2005)

Smith v. Federal Trade Commission, 403 F. Supp. 1000, 1016 n.48 (D. Del. 1975)
in making claims of deliberative process privilege, relatively high-level personal review is required in order to deter governmental units from too freely claiming a privilege that is not to be lightly invoked by assuring that someone in a position of high authority could examine the materials involved from a vantage point involving both expertise and an overview-type perspective; LBP-05-33, 62 NRC 844 (2005)

South Louisiana Environmental Council, Inc. v. Sand, 629 F.2d 1005, 1011 (5th Cir. 1980)
in weighing the potential environmental harm of a proposed project against the benefits, the test is whether the economic considerations were so distorted as to impair fair consideration of those environmental consequences; LBP-05-19, 62 NRC 168 (2005)
NEPA permits, at most, a narrowly focused, indirect review of the agency analysis of the economic assumptions underlying a federal project described in an impact statement; LBP-05-19, 62 NRC 168 n.127 (2005)

State of New Jersey (Department of Law and Public Safety), CLI-93-25, 38 NRC 289, 295 (1993)
to demonstrate good cause, a petitioner must show not only why it could not have filed within the time specified in the notice of opportunity for hearing, but also that it filed as soon as possible thereafter; CLI-05-24, 62 NRC 564-65 (2005)

State of New Jersey (Department of Law and Public Safety), CLI-93-25, 38 NRC 289, 296 (1993)
good cause for failure to file on time is entitled to the most weight in determining whether a new or amended contention is admissible; CLI-05-24, 62 NRC 564 (2005); LBP-05-32, 62 NRC 821 (2005)
if a petitioner cannot show good cause for its late filing, then its demonstration on the other factors must be compelling; CLI-05-24, 62 NRC 565 (2005)

Statement of Policy: Further Commission Guidance for Power Reactor Operating Licenses, CLI-81-16, 14 NRC 14, 16 (1981) (separate views of Chairman Ahearne and Commissioner Hendrie)
the special circumstances that allow a board to grant an exemption or a waiver of a rule must be unique to the facility rather than common to a large class of facilities; CLI-05-24, 62 NRC 560 (2005)

Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC 18 (1998)
apart from its policy of encouraging settlements, NRC has an equally important policy supporting prompt decisionmaking, which carries added weight in license renewal proceedings; CLI-05-24, 62 NRC 568 (2005)
boards should expeditiously decide legal and policy issues and follow the guidance in NRC policy statements; CLI-05-16, 62 NRC 35 (2005)

Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC 18, 21 (1998)
a decision typically should be rendered within 60 days of the filing of the final briefs; LBP-05-29, 62 NRC 651 n.22 (2005)

Statement of Policy on Conduct of Licensing Proceedings, CLI-81-8, 13 NRC 452, 453 (1981)
boards should expeditiously decide legal and policy issues and follow the guidance in NRC policy statements; CLI-05-16, 62 NRC 35 (2005)

Steel Co. v. Citizens For a Better Environment, 523 U.S. 83, 89 (1998)
a federal claim is not colorable if it is so insubstantial, implausible, foreclosed by prior decisions of the Court, or otherwise completely devoid of merit as not to involve a federal controversy; LBP-05-17, 62 NRC 117 n.24 (2005)

Systems Energy Resources, Inc. (Early Site Permit for Grand Gulf ESP Site), CLI-05-4, 61 NRC 10, 13 (2005)
NRC boards do not sit to ''flyspeck'' environmental documents or to add details or nuances; CLI-05-29, 62 NRC 811 (2005)

System Energy Resources, Inc. (Early Site Permit for Grand Gulf ESP Site), LBP-04-19, 60 NRC 277, 282 (2004)
when faced with the ''contested'' versus ''uncontested'' question, NRC licensing boards have repeatedly distinguished between the contested and uncontested '' portion'' of proceedings; CLI-05-16, 62 NRC 35 (2005)

LEGAL CITATIONS INDEX

CASES

Tax Analysts v. IRS, 117 F.3d 607, 616 (D.C. Cir. 1997)
deliberative process privilege is a variant of executive privilege; LBP-05-33, 62 NRC 842 n.26 (2005)

Taxation with Representation Fund v. IRS, 646 F.2d 666, 676-77 (D.C. Cir. 1981)
deliberative process privilege is sometimes called the executive or governmental privilege; LBP-05-33, 62 NRC 842 n.26 (2005)

Tennessee Valley Authority, 4 AEC 136 (1968)
licensing boards indicate that AEC's hearing notices in uncontested proceedings instruct boards to ''consider'' issues, rather than ''determine'' them as in section 2.104(b)(2); CLI-05-16, 62 NRC 37 (2005)

Tennessee Valley Authority (Browns Ferry, Units 1 and 2), 3 AEC 209, 209-10 (1967)
licensing boards indicate that AEC's hearing notices in uncontested proceedings instruct boards to ''consider'' issues, rather than ''determine'' them as in section 2.104(b)(2); CLI-05-16, 62 NRC 37 (2005)

Tennessee Valley Authority (Hartsville Nuclear Plant, Units 1A, 2A, 1B, and 2B), LBP-76-44, 4 NRC 637, 645 (1976)
in testing the adequacy of Staff's review, boards have authority to deny the construction permit outright or to set conditions on its approval; CLI-05-16, 62 NRC 42 (2005)

Tennessee Valley Authority (Watts Bar Nuclear Plant, Unit 1; Sequoyah Nuclear Plant, Units 1 and 2; Browns Ferry Nuclear Plant, Units 1, 2, and 3), CLI-04-24, 60 NRC 160, 189 (2004)
a ''clearly erroneous'' finding is one that is not even plausible in light of the record viewed in its entirety; CLI-05-19, 62 NRC 411, 421 (2005)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-88-12, 28 NRC 605, 610, *reconsideration denied,* CLI-89-6, 29 NRC 348 (1989), *aff'd sub nom. Citizens for Fair Utility Regulation v. NRC,* 898 F.2d 51 (5th Cir. 1990)
if a petitioner cannot show good cause for its late filing, then its demonstration on the other factors must be compelling; CLI-05-24, 62 NRC 565 (2005)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 69-73 (1992)
the good-cause factor generally may be satisfied by a showing that the information on which the contention is based is new so that the petitioner could not have presented it at an earlier time, and the petitioner filed the contention promptly after learning of the new information; LBP-05-19, 62 NRC 162 (2005)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 73-75 (1992)
if a petitioner cannot show good cause for its late filing, then its demonstration on the other factors must be compelling; CLI-05-24, 62 NRC 565 (2005)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 75 (1992)
barring the most compelling countervailing considerations, an inexcusably tardy petition to intervene would stand little chance of success if its grant would likely occasion an alteration in hearing schedules; CLI-05-24, 62 NRC 566 n.67 (2005)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station), CLI-93-10, 37 NRC 192, 200 n.28 (1993)
absent compelling reasons, the Commission adheres to the case or controversy doctrine in its adjudicatory proceedings; LBP-05-17, 62 NRC 91 (2005)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Units 1 and 2), LBP-84-10, 19 NRC 509, 530 (1984)
intervenor asserts that a less stringent reopening standard is warranted in view of its expense and resource commitment at the hearing and applicant's ''eleventh hour'' change in its financial assurance demonstration; LBP-05-20, 62 NRC 201 (2005)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992)
any contention that fails to directly controvert the application, or that mistakenly asserts that the application does not address a relevant issue, may be dismissed; LBP-05-28, 62 NRC 598 (2005); LBP-05-31, 62 NRC 750 (2005)

LEGAL CITATIONS INDEX

CASES

Texas Utilities Generating Co. (Comanche Peak Steam Electric Station), ALAB-714, 17 NRC 86, 94 (1983)
a licensing board is not prohibited from issuing advisory opinions where there is a genuine dispute, well presented; LBP-05-27, 62 NRC 518 n.174 (2005)
nonjusticiable controversies are very poor vehicles for adjudicatory pronouncements; LBP-05-17, 62 NRC 92 (2005)

Tongass Conservation Society v. Cheney, 924 F.2d 1137, 1140 (D.C. Cir. 1991)
the draft environmental impact statement, and eventually the final environmental impact statement, must contain a thorough, reasoned discussion of the relevant environmental considerations; LBP-05-19, 62 NRC 152 (2005)

Union of Concerned Scientists v. AEC, 499 F.2d 1069, 1075 (D.C. Cir. 1974)
the mandatory hearing requirement was intended to address open-government and public-confidence associated with the Commission's treatment of applications for power reactor construction permits; CLI-05-16, 62 NRC 28 (2005)

Union of Concerned Scientists v. AEC, 499 F.2d 1069, 1076 (D.C. Cir. 1974)
boards should inquire whether the NRC Staff performed an adequate review and made findings with reasonable support in logic and fact; CLI-05-16, 62 NRC 39 (2005)
Congress's decision to eliminate the mandatory hearing requirement for operating license applications was based in part on the conclusion that there would still be a mandatory hearing at the critical point in reactor licensing (the construction permit stage) where the suitability of the site is to be judged; CLI-05-16, 62 NRC 28 n.15 (2005)

Union of Concerned Scientists v. AEC, 499 F.2d 1069, 1077 (D.C. Cir. 1974)
if only a portion of a proceeding's issues are in dispute, it makes no sense for a licensing board to proceed as if the entire adjudication is contested, with consequently greater demands on the parties' and the board's time and resources; CLI-05-16, 62 NRC 36 (2005)
in testing the adequacy of the Staff's review, boards have authority to order the record to be supplemented; CLI-05-16, 62 NRC 42 (2005)
it is not possible for the two technical members of the licensing board panel to evaluate the totality of the material relevant to safety matters that the Staff and ACRS have generated through many months of work; CLI-05-16, 62 NRC 41 (2005)

Union of Concerned Scientists v. NRC, 735 F.2d 1437, 1449 (D.C. Cir. 1984)
Congress did not mean to require a hearing under the AEA where a hearing serves no purpose; LBP-05-17, 62 NRC 94 n.11 (2005)

Union of Concerned Scientists v. NRC, 920 F.2d 50, 53 (D.C. Cir. 1990)
the Atomic Energy Act itself nowhere prescribes the content of a mandatory hearing or prescribes the manner in which this hearing is to be run; CLI-05-16, 62 NRC 42 (2005)

United States v. Adlman, 134 F.3d 1194, 1202 (2d Cir. 1998)
the ''because of'' formulation withholds protection from documents that are prepared in the ordinary course of business or that would have been created in essentially similar form irrespective of the litigation even if such documents might also help in preparation for litigation; LBP-05-27, 62 NRC 520 (2005)

United States v. Bell, 988 F.2d 247, 251 (1st Cir. 1993)
under law of the case doctrine, changed circumstances include situations where intervening controlling authority makes reconsideration appropriate or substantially different evidence is adduced at a subsequent stage of the proceeding; LBP-05-17, 62 NRC 88 (2005); LBP-05-26, 62 NRC 457 (2005)

United States v. Davis, 636 F.2d 1028, 1040 (5th Cir. 1981)
a ''primary purpose'' test is adopted for determining the applicability of privilege to dual-purpose documents; LBP-05-27, 62 NRC 519 (2005)

United States v. Dunkel, 927 F.2d 955, 956 (7th Cir. 1991)
judges are not like pigs, hunting for truffles buried in the record; LBP-05-17, 62 NRC 99 n.14 (2005)

United States v. Miller, 822 F.2d 828, 832-33 (9th Cir. 1987)
law of the case doctrine should not be applied woodenly in a way inconsistent with substantial justice; LBP-05-17, 62 NRC 87 (2005); LBP-05-26, 62 NRC 457 (2005)

United States v. Nixon, 418 U.S. 683 (1974)
constitutional presidential communications privilege is a form of executive privilege; LBP-05-33, 62 NRC 842 n.26 (2005)

United States v. Nixon, 418 U.S. 683, 710 (1974)
a decision to withhold an otherwise discoverable document is not a mere initial determination because, in a Subpart L proceeding, and absent the filing of a motion to compel and litigation over the issue, it results in the permanent withholding of an otherwise discoverable document from a litigant and is, in short, in derogation of the search for the truth; LBP-05-33, 62 NRC 848 (2005)
United States v. Reynolds, 345 U.S. 1 (1953)
the state secrets privilege is a form of executive privilege; LBP-05-33, 62 NRC 842 n.26 (2005)
United States v. Reynolds, 345 U.S. 1, 7 (1953)
executive privilege is an extraordinary assertion of power not to be lightly invoked; LBP-05-33, 62 NRC 847 n.34 (2005)
United States v. Reynolds, 345 U.S. 1, 7-8 (1953)
Staff's determination to assert the deliberative process privilege over a document must be made by a department head who has reviewed the document and made the decision; LBP-05-33, 62 NRC 849 n.38 (2005)
United States v. Ruiz, 536 U.S. 622, 628 (2002)
a federal court always has jurisdiction to determine its own jurisdiction; LBP-05-16, 62 NRC 71 n.13 (2004)
United States v. Steel Tank Barge H 1651, 272 F. Supp. 658, 659 n.1 (E.D. La. 1967)
intervenors and other parties have the fundamental right of fair treatment; LBP-05-29, 62 NRC 698 (2005)
United States v. United Mine Workers of America, 330 U.S. 258, 290-92 (1947)
''jurisdiction to determine jurisdiction'' refers to the power of a court to determine whether it has jurisdiction over the parties to, and the subject matter of, a suit; LBP-05-16, 62 NRC 71 n.13 (2004)
United States Department of Energy v. Brett, 659 F.2d 154, 155 (Temp. Emer. Ct. App. 1981) (per curiam)
the deliberative process privilege does not need to be asserted by the head of an agency or even a senior official, but may be raised by individuals with specific and detailed knowledge of the documents in which the privilege is asserted; LBP-05-33, 62 NRC 844 n.28 (2005)
United States Department of Energy (Clinch River Breeder Reactor Plant), CLI-76-13, 4 NRC 67, 76, 79, 81, 89 n.28, 90-91, 92 (1976)
NRC is required to consider alternatives before deciding whether to take major federal actions significantly affecting the environment, but the ''reasonable alternatives'' issue does not apply with full force to early site permit or ''partial'' construction permit cases; CLI-05-16, 62 NRC 48 (2005)
United States Department of Energy (Clinch River Breeder Reactor Plant), LBP-83-8, 17 NRC 158 (1983), *vacated on other grounds,* ALAB-755, 18 NRC 1337 (1983)
when faced with the ''contested'' versus ''uncontested'' question, NRC licensing boards have repeatedly distinguished between the contested and uncontested '' portion'' of proceedings; CLI-05-16, 62 NRC 35 (2005)
United States Department of Energy (Clinch River Breeder Reactor Plant), LBP-85-7, 21 NRC 507 (1985)
the Commission has faced few proceedings where the mandatory hearing requirement was applicable; CLI-05-16, 62 NRC 34 (2005)
United States Department of Energy (Plutonium Export License), CLI-04-17, 59 NRC 357, 363-64 (2004)
mere intellectual or academic interest in a facility or proceeding is insufficient, in and of itself, to demonstrate standing; CLI-05-26, 62 NRC 580 (2005)
USEC, Inc. (American Centrifuge Plant), CLI-04-30, 60 NRC 426, 428, 437 (2004)
hearing notices require compliance with Part 51, which in turn expressly requires cost-benefit weighing; CLI-05-16, 62 NRC 46 n.102 (2005)
Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 551 (1978)
applicant is not required to look at every conceivable alternative to its proposed action; LBP-05-31, 62 NRC 753 (2005)
Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 553 (1978)
in seeking to pose an admissible challenge to the environmental report or draft environmental impact statement discussion regarding alternatives, the burden is on intervenors to propose reasonable alternatives by which baseload power could be generated; LBP-05-19, 62 NRC 158 n.78 (2005)

intervenor has the burden to structure its participation so that it is meaningful, so that it alerts the agency to its position and contentions; CLI-05-19, 62 NRC 414 (2005)

Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 553-54 (1978)

the purpose of contention pleading requirements is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-05-28, 62 NRC 595 (2005); LBP-05-31, 62 NRC 747 (2005)

Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), ALAB-138, 6 AEC 520, 523 (1973)

even though a matter is timely raised and involves significant safety considerations, no reopening of the evidentiary hearing will be required if the affidavits submitted in response to the motion demonstrate that there is no genuine unresolved issue of fact; LBP-05-20, 62 NRC 227-28 (2005)

Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part on other grounds and remanded,* CLI-90-4, 31 NRC 333 (1990)

supporting information, facts, and expert opinions provided by the petitioner will be examined by the board to confirm that they indicate the existence of adequate support for the contention; LBP-05-28, 62 NRC 598 (2005); LBP-05-31, 62 NRC 750 (2005)

Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151 (2000)

proximity standing has been granted to intervenors in proceedings addressing the transfer of both operating authority and ownership interests; CLI-05-26, 62 NRC 582 (2005)

Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 163-64 (2000)

proximity standing is granted in a case involving a direct transfer of both the ownership and operation of the plant; CLI-05-25, 62 NRC 576 (2005)

Virginia Electric and Power Co. (North Anna Power Station, Units 1 and 2), ALAB-522, 9 NRC 54, 56 (1979)

proximity standing rests on the presumption that an accident associated with the nuclear facility could adversely affect the health and safety of people working, living, or regularly engaging in activities offsite but within a certain distance of a facility; CLI-05-25, 62 NRC 575 (2005); CLI-05-26, 62 NRC 580 (2005)

Virginia Electric and Power Co. (North Anna Power Station, Units 1 and 2), ALAB-584, 11 NRC 451, 458 (1980)

cost would only come into the analytical balancing if the environmental impact balancing indicates that a reasonable alternative is environmentally preferable to the proposed project; LBP-05-19, 62 NRC 179 (2005)

Walsh v. United States Army Corps of Engineers, 757 F. Supp. 781 (W.D. Tex. 1990)

a federal agency did not violate NHPA by issuing a permit authorizing construction of a dam and reservoir prior to completing NHPA review; LBP-05-26, 62 NRC 462 n.14 (2005)

Washington Metropolitan Area Transit Commission v. Holiday Tours, Inc., 559 F.2d 841, 844-45 (D.C. Cir. 1977)

a tribunal may issue a stay when there is a difficult legal question and the equities in the case suggest that the status quo be maintained; CLI-05-27, 62 NRC 719 n.21 (2005)

Weiss v. Kay Jewelry Stores, Inc., 470 F.2d 1259, 1261-62 (D.C. Cir. 1972)

the Board's function in considering summary disposition is only to decide whether genuine issues of material fact remain between the parties, not to substantively seek to resolve material factual issues that do exist; LBP-05-19, 62 NRC 180 (2005)

Westlands Water District v. United States Department of Interior, 376 F.3d 853, 868 (9th Cir. 2004)

NEPA does not require agencies to analyze impacts of alternatives that are speculative, remote, impractical, or not viable; CLI-05-28, 62 NRC 729 (2005)

Westlands Water District v. United States Department of Interior, 376 F.3d 853, 868, 871 (9th Cir. 2004)

NEPA does not require a separate analysis of alternatives that would have substantially similar consequences; CLI-05-28, 62 NRC 728 (2005)

LEGAL CITATIONS INDEX

CASES

Williams v. Eastside Lumberyard and Supply Co., 190 F. Supp. 2d 1104, 1114 (S.D. Ill. 2001)
the presiding officer is an impartial arbiter of the challenges raised by the intervenors, and the integrity of this function would be undermined if the presiding officer were required to search the record for evidence to construct and develop the Intervenors' arguments; LBP-05-17, 62 NRC 98 (2005)

Wisconsin Michigan Power Co. (Point Beach Nuclear Plant, Unit 1), 4 AEC 3, 3-4 (1967)
licensing boards indicate that AEC's hearing notices in uncontested proceedings instruct boards to ''consider'' issues, rather than ''determine'' them as in section 2.104(b)(2); CLI-05-16, 62 NRC 37 (2005)

Yankee Atomic Electric Co. v. United States, 54 Fed. Cl. 306, 311 (2002)
the Secretary of Energy was allowed to delegate the authority to claim deliberative process privilege to the Chief Operating Officer of Civilian Radioactive Waste Management within DOE; LBP-05-33, 62 NRC 843-44 n.28 (2005)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-94-3, 39 NRC 95, 102 n.10 (1994)
a petitioner may not simply assert interests of third persons as a basis for standing; LBP-05-31, 62 NRC 745 (2005)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996)
to demonstrate standing in a license transfer proceeding, a petitioner must show that the proposed transfer would injure his financial, property, or other interests; CLI-05-26, 62 NRC 579 (2005)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 9 (1996)
a contention challenging the reasonableness of a decommissioning plan's cost estimate provisions should not be litigable if the only relief available would be a formalistic redraft of the plan with a new estimate; LBP-05-21, 62 NRC 298-99 (2005)
petitioners have to demonstrate not only that the decommissioning cost estimate is in error but that there is not reasonable assurance that the amount will be paid; LBP-05-21, 62 NRC 299 n.10 (2005)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 259 (1996)
a contention challenging the reasonableness of a decommissioning plan's cost estimate provisions should not be litigable if the only relief available would be a formalistic redraft of the plan with a new estimate; LBP-05-21, 62 NRC 298 (2005)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 260 (1996)
applicant must demonstrate reasonable assurance of sufficient decommissioning funding, not provide an ironclad guarantee; LBP-05-22, 62 NRC 365 (2005)
petitioner's last-minute challenge to the redaction of eleven passages in the hearing transcript offers no justification, as required under NRC rules governing late-filed arguments, why it should be permitted to raise this argument for the first time on appeal; CLI-05-16, 62 NRC 4 (2005)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-99-24, 50 NRC 219, 222 (1999)
although unreviewed board decisions do not create binding legal precedent, it is prudent to vacate such decisions when Commission appellate review is cut short by mootness; CLI-05-22, 62 NRC 544 (2005)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-05-15, 61 NRC 365, 373-74 (2005)
the Commission turns to the Statement of Considerations only after finding dictionary definitions insufficient to resolve questions of interpretation; LBP-05-27, 62 NRC 512 n.144 (2005)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 75 (1996), *rev'd in part on other grounds,* CLI-96-7, 43 NRC 235 (1996)
for a contention to be material, there must be some significant link between the claimed deficiency and either the health and safety of the public or of the environment; LBP-05-28, 62 NRC 596 (2005); LBP-05-31, 62 NRC 749 (2005)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 81 (1996)
a contention challenging the reasonableness of a decommissioning plan's cost estimate provisions should not be litigable if the only relief available would be a formalistic redraft of the plan with a new estimate; LBP-05-21, 62 NRC 298 (2005)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90 (1996), *rev'd in part on other grounds,* CLI-96-7, 43 NRC 235 (1996)
petitioner does not have to prove its contention at the admissibility stage, but supporting material is subject to board scrutiny; LBP-05-28, 62 NRC 597 (2005); LBP-05-31, 62 NRC 749 (2005)

Zenith Radio Corp. v. United States, 764 F.2d 1577, 1580 (Fed. Cir. 1985)
executive privilege protects agency officials' deliberations, advisory opinions, and recommendations in order to promote frank discussion of legal or policy matters in the decisionmaking process; LBP-05-33, 62 NRC 842 n.26 (2005)

LEGAL CITATIONS INDEX
REGULATIONS

10 C.F.R. Part 2, Subparts A-M
the word ''hearing'' can refer to any of a number of events; CLI-05-16, 62 NRC 42 (2005)
10 C.F.R. 2.4
an application is considered contested if there is a controversy between the Staff and the applicant concerning issuance of the license or any of its terms or a petition to intervene in opposition to an application has been granted or is pending before the Commission; CLI-05-16, 62 NRC 29 n.19 (2005)
10 C.F.R. 2.101(f)(1)
a license application must be prepared because it is a prerequisite to receiving a license; LBP-05-27, 62 NRC 520 (2005)
10 C.F.R. 2.102(a) (1956)
in 1957, the AEC was issuing construction permits without prior notice to the public and generally without a public hearing; CLI-05-16, 62 NRC 27 (2005)
10 C.F.R. 2.104
notice of hearing provided via the *Federal Register* is legally sufficient; CLI-05-24, 62 NRC 565 n.60 (2005)
10 C.F.R. 2.104(b)
because Appendix A of Part 2 has not been replaced with conflicting guidance, the Commission relies on it as an authoritative expression of the 1966 Commission's interpretation of, and as support for our own current interpretation of, this regulation; CLI-05-16, 62 NRC 35 n.40 (2005)
issues to be addressed in both contested and uncontested construction permit proceedings are described; CLI-05-16, 62 NRC 28 (2005)
10 C.F.R. 2.104(b)(1)
factors that a licensing board is required to consider for hearings on contested applications are discussed; CLI-05-16, 62 NRC 29 (2005)
the term ''consider'' is seen as essentially synonymous with the term ''determine''; CLI-05-16, 62 NRC 36 (2005)
10 C.F.R. 2.104(b)(1)(i)(*d*)(*2*)
AEA Safety Issue 2 is whether, taking into consideration the site criteria contained in Part 100, a reactor having characteristics that fall within the parameters for the site can be constructed and operated without undue risk to the health and safety of the public; CLI-05-16, 62 NRC 33 n.32 (2005)
10 C.F.R. 2.104(b)(1)(iv)
AEA Safety Issue 1 is whether the issuance of an early site permit will be inimical to the common defense and security or to the health and safety of the public; CLI-05-16, 62 NRC 33 n.32 (2005)
10 C.F.R. 2.104(b)(2)
de novo board review of uncontested AEA issues is expressly prohibited, but this prohibition does not apply to NEPA issues; CLI-05-16, 62 NRC 39 (2005)
factors that a licensing board is required to determine for hearings on uncontested applications are discussed; CLI-05-16, 62 NRC 30 (2005)
the term ''consider'' is seen as essentially synonymous with the term ''determine''; CLI-05-16, 62 NRC 36 (2005)
10 C.F.R. 2.104(b)(3)
licensing boards must reach their own independent determination on uncontested NEPA ''baseline'' questions; CLI-05-16, 62 NRC 45 (2005)

whether or not an application is contested, NRC regulations give a licensing board special responsibility for three baseline NEPA issues; CLI-05-16, 62 NRC 30 (2005)
10 C.F.R. 2.104(b)(3)(i)
although this regulation contains no direct reference to considering reasonable alternatives, it still imposes that same requirement indirectly, by mandating that applications satisfy the standards of Part 51, Subpart A; CLI-05-16, 62 NRC 49 (2005)
10 C.F.R. 2.104(c)(3)
pump tests are not intended to guarantee against interaquifer communication of lixiviant, but are an integral part of a multifaceted and ongoing process designed to provide a reasonable assurance that vertical excursions of lixiviant outside the aquifer will not occur; LBP-05-17, 62 NRC 100 (2005)
the pertinent inquiry is whether the methodology for making post-hearing determinations is sufficiently detailed and prescriptive so that, assuming applicant complies with that methodology, the Commission has reasonable assurance that these determinations will not endanger public health and safety; LBP-05-17, 62 NRC 94 n.11 (2005)
10 C.F.R. 2.105, 2.106
notice of issuance of license or license amendment provided via the *Federal Register* is legally sufficient; CLI-05-24, 62 NRC 565 n.60 (2005)
10 C.F.R. 2.107(a)
withdrawal of an application after the issuance of a notice of hearing shall be on such terms as the presiding officer may prescribe; CLI-05-23, 62 NRC 548 n.9 (2005)
10 C.F.R. 2.206
a board finds no basis for treating, and does not recognize, petitions under this section as a practical ''other means'' available for protecting petitioner's interests within the meaning of the fifth factor in the regulatory criteria; LBP-05-16, 62 NRC 67 (2004)
issues that can be addressed in ongoing licensing proceedings are not accepted for review under; DD-05-2, 62 NRC 390 (2005)
licensee's failure to provide complete and accurate information in its license renewal application is deemed a minor violation and not subject to a civil penalty; DD-05-6, 62 NRC 856-61 (2005)
other methods are available to inspectors to obtain design basis information from licensee, rendering a Demand for Information unnecessary for the purposes of the inspection; DD-05-2, 62 NRC 390-401 (2005)
petition challenging NRC policy regarding the dispositioning of violations involving exposures above regulatory limits and reporting of releases fails to raise a concern properly subject to; DD-05-8, 62 NRC 875 (2005)
petitioner may pursue its concerns about current emergency plans by filing a request for action; CLI-05-24, 62 NRC 561, 565 (2005)
petitioner requests that NRC require licensees of Mark I and II boiling water reactors to take additional protective measures, including structural protection measures; DD-05-4, 62 NRC 783-90 (2005)
petitioner requests that NRC take immediate and decisive action to address alert and notification system deficiencies; DD-05-3, 62 NRC 766-81 (2005)
petitioner's concern with the quality of the fire barriers is resolved by licensee's replacement of Hemyc in systems that are credited in the plant safe shutdown capability analysis; DD-05-7, 62 NRC 863-65 (2005)
petitioner's request for remediation and mitigation of conditions resulting from test-firing of DU munitions is considered insofar as it relates to the decontamination and decommissioning of nuclear facilities; DD-05-8, 62 NRC 867-85 (2005)
those dissatisfied with Staff or Commission action can, outside of the adjudicatory process, file with the Staff a petition seeking the modification of an existing license; LBP-05-16, 62 NRC 67 (2004)
10 C.F.R. 2.206(a)
a request to institute an enforcement proceeding should be grounded on articulable facts, not bare suspicion or tubular conjecture; LBP-05-17, 62 NRC 95 (2005)
10 C.F.R. 2.302(a)(3)
petitions to intervene in Commission proceedings may be filed by e-mail, but such documents may be refused acceptance for filing if the original and two copies are not mailed to the Commission's

Rulemakings and Adjudications Staff; LBP-05-28, 62 NRC 592 (2005); LBP-05-31, 62 NRC 741 n.6 (2005)
10 C.F.R. 2.304(b)
mailed intervention petitions that comply with the format requirements cannot be considered as filed on the date of the electronic submission if they are substantively different; LBP-05-28, 62 NRC 592 (2005)
10 C.F.R. 2.304(f)
petitions to intervene filed electronically may be refused acceptance for filing if they differ substantially from the required hardcopy version filed 2 days later; LBP-05-28, 62 NRC 592 (2005)
petitions to intervene filed electronically may be refused acceptance for filing unless, within 2 days after the electronic filing, an original and two copies of these documents, in the format specified in section 2.304(b), are mailed to the Commission's Rulemakings and Adjudications Staff; LBP-05-28, 62 NRC 592 (2005); LBP-05-31, 62 NRC 741 n.6 (2005)
10 C.F.R. 2.304(g)
petitions to intervene filed electronically could be refused acceptance for filing if they differ substantially from the required hardcopy version filed 2 days later; LBP-05-28, 62 NRC 593 (2005)
petitions to intervene filed electronically may be refused acceptance for filing unless, within 2 days after the electronic filing, an original and two copies of these documents, in the format specified in section 2.304(b), are mailed to the Commission's Rulemakings and Adjudications Staff; LBP-05-28, 62 NRC 593 (2005); LBP-05-31, 62 NRC 741 n.6 (2005)
10 C.F.R. 2.309
NRC rules expressly allow timely amendment of NEPA contentions if there is significant new information or different conclusions in the DEIS that could not have been challenged previously; CLI-05-20, 62 NRC 533 (2005)
10 C.F.R. 2.309(a)
any individual, group, business, or governmental entity that wishes to intervene as a party in an adjudicatory proceeding addressing a proposed licensing action must establish that it has standing and offer at least one admissible contention; LBP-05-28, 62 NRC 594 (2005)
10 C.F.R. 2.309(a)-(b)
any individual, group, business, or governmental entity that wishes to intervene as a party in an adjudicatory proceeding addressing a proposed licensing action must file a timely written request to intervene, establish that it has standing, and offer at least one admissible contention; LBP-05-31, 62 NRC 743 (2005)
10 C.F.R. 2.309(b)
requests for hearings or petitions to intervene and proposed contentions must be filed within the period of time specified; LBP-05-19, 62 NRC 160 (2005)
10 C.F.R. 2.309(b)(2)
petitioners will have 30 days rather than the normal 60 days from the date the license application is docketed within which to file its contentions; LBP-05-27, 62 NRC 517 (2005)
10 C.F.R. 2.309(c)
it is neither logical nor sensible to impose only eight conditions on the admissibility of a contention based on old information and where the proponent has, through his own inadvertence, forgotten to raise it, and yet impose even more hurdles (three plus eight) on a contention based on new information where the proponent is blameless and prompt; LBP-05-32, 62 NRC 821-22 (2005)
mailed intervention petitions that are substantively different from the electronic version are not timely filed and thus must be accompanied by a request that the board accept them as a nontimely filing; LBP-05-28, 62 NRC 592 (2005)
nontimely filings will not be considered by a licensing board absent a showing that, based upon a balancing of eight factors, the request should be entertained; LBP-05-19, 62 NRC 160 (2005)
the phrase ''differ significantly'' neither adds to nor takes away from any of the admissibility requirements in; LBP-05-19, 62 NRC 162 (2005)
10 C.F.R. 2.309(c)(1)
eight factors are to be considered and balanced when determining whether to consider a late-filed petition to intervene; CLI-05-24, 62 NRC 563-64 (2005)
evaluation and weighting of a late-filed petition depends in no small measure on how an overriding conceptual analysis is performed; LBP-05-16, 62 NRC 65 (2004)

information regarding the applicant's environmental report and the Staff's environmental review documents is relevant to the good-cause factor found in; LBP-05-19, 62 NRC 162 (2005)
10 C.F.R. 2.309(c)(1)(i)
a new contention that is based on material information not previously available and that was timely filed shows good cause for the failure to file on time; LBP-05-32, 62 NRC 822 (2005)
if filed within the prescribed 20-day period, a motion for leave to file a new contention will be deemed to satisfy the requirements of; LBP-05-24, 62 NRC 433 n.11 (2005)
10 C.F.R. 2.309(d)
to demonstrate standing in a license transfer proceeding, a petitioner must show that the proposed transfer would injure his financial, property, or other interests; CLI-05-26, 62 NRC 579 (2005)
to qualify as an intervenor, a petitioner must proffer at least one admissible contention and demonstrate standing; CLI-05-26, 62 NRC 579 (2005)
to qualify for intervention, petitioner must demonstrate standing; CLI-05-25, 62 NRC 574 (2005)
10 C.F.R. 2.309(d)(1)
an organization may satisfy the standing criteria by demonstrating organizational standing or representational standing; LBP-05-31, 62 NRC 744 (2005)
10 C.F.R. 2.309(d)(1)(ii)-(iv)
to establish standing, an intervention petitioner must provide information in its petition concerning the nature of the petitioner's right under the Atomic Energy Act or the National Environmental Policy Act to be made a party, the petitioner's property, financial, or other interests in the proceeding, and the potential effect that any decision reached within the proceeding may have on the petitioner's interest; LBP-05-31, 62 NRC 744 (2005)
10 C.F.R. 2.309(d)(1)(iii)
an intervenor must have some direct interest in the outcome of a proceeding; CLI-05-26, 62 NRC 579 (2005)
10 C.F.R. 2.309(d)(2)(i)
automatic full-participation standing is conferred on governmental bodies if they have jurisdiction over the geographical area in which the reactor at issue is located; LBP-05-16, 62 NRC 66 (2004)
10 C.F.R. 2.309(f)
general ''areas of concern'' are no longer sufficient to trigger a hearing in a Subpart L proceeding; CLI-05-23, 62 NRC 549 (2005)
in NRC practice, ''contentions'' must be based on documents or other information available at the time the petition is filed, and petitioners must articulate at the outset the specific issues they wish to litigate; CLI-05-20, 62 NRC 526 (2005)
intervenors are obliged under NRC pleading regulations to offer specific contentions on material issues, supported by alleged facts or expert opinion; CLI-05-29, 62 NRC 808 (2005)
the purpose of the contention rule is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-05-31, 62 NRC 747 (2005)
to qualify as an intervenor, a petitioner must proffer at least one admissible contention and demonstrate standing; CLI-05-26, 62 NRC 579 (2005)
to qualify for intervention, petitioner must demonstrate standing; CLI-05-25, 62 NRC 574 (2005)
10 C.F.R. 2.309(f)(1)
each portion of an amended contention must meet the requirements for contention admissibility; LBP-05-19, 62 NRC 164 (2005)
failure of a proposed contention to meet any one of the pleading requirements is grounds for its dismissal; CLI-05-24, 62 NRC 567 (2005)
in addition to the requirement that a contention be filed within a specified period of time or be shown to satisfy the criteria for admissibility if it is nontimely, a contention must satisfy the substantive admissibility criteria of; LBP-05-19, 62 NRC 160 (2005)
the phrase ''differ significantly'' neither adds to nor takes away from any of the admissibility requirements in; LBP-05-19, 62 NRC 162 (2005)
10 C.F.R. 2.309(f)(1)(i)-(vi)
new or amended contentions must meet the standard admissibility requirements in addition to the three requirements of section 2.309(f)(2)(i)-(iii); LBP-05-32, 62 NRC 819, 822-25 (2005)

pleading standards for admissible contentions are described; CLI-05-24, 62 NRC 567 (2005); LBP-05-28, 62 NRC 594 (2005); LBP-05-31, 62 NRC 747, 755 (2005)
10 C.F.R. 2.309(f)(1)(ii)
a brief explanation of the basis for a contention is a necessary prerequisite for admissibility; LBP-05-28, 62 NRC 595 (2005); LBP-05-31, 62 NRC 748, 758, 760 (2005); LBP-05-32, 62 NRC 816, 823 (2005)
10 C.F.R. 2.309(f)(1)(iii)
a contention alleging that applicant has failed to provide adequate analysis to demonstrate that the alternate cooling system, under uprate conditions, will be able to withstand the effects of an earthquake and other natural phenomena without losing its safety capabilities is within the scope of an operating license amendment proceeding; LBP-05-32, 62 NRC 823 (2005)
a petitioner must demonstrate that the issue raised in a contention is within the scope of the proceeding, which is defined by the Commission in its initial hearing notice and order referring the proceeding to the Licensing Board; LBP-05-28, 62 NRC 595 (2005); LBP-05-31, 62 NRC 748, 760 (2005)
pleading requirements for intervention petitions are described; CLI-05-24, 62 NRC 567 (2005)
risk from terrorist attacks is outside the scope of an early site permit proceeding; LBP-05-19, 62 NRC 176 (2005)
10 C.F.R. 2.309(f)(1)(iv)
a contention alleging that applicant has failed to provide adequate analysis to demonstrate that the alternate cooling system, under uprate conditions, will be able to withstand the effects of an earthquake and other natural phenomena without losing its safety capabilities is within the scope of an operating license amendment proceeding; LBP-05-32, 62 NRC 823 (2005)
to proffer an admissible contention, a petitioner must demonstrate that the contention asserts an issue of law or fact that is material to the findings the NRC must make to support the action that is involved in the proceeding; LBP-05-19, 62 NRC 161 (2005); LBP-05-28, 62 NRC 596 (2005); LBP-05-31, 62 NRC 748 (2005)
10 C.F.R. 2.309(f)(1)(v)
contentions must be supported by a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue together with references to the specific sources and documents on which it intends to rely to support its position; LBP-05-19, 62 NRC 172, 173, 176 (2005); LBP-05-28, 62 NRC 596 (2005); LBP-05-31, 62 NRC 749, 754, 756, 759, 760, 761 (2005); LBP-05-32, 62 NRC 824 (2005)
10 C.F.R. 2.309(f)(1)(vi)
a component of intervenors' motion to amend a contention is inadmissible because it is not based upon data or conclusions that differ significantly from those in the Applicant's documents; LBP-05-19, 62 NRC 174, 175, 177, 178, 179 (2005)
a contention lacking the requisite degree of specificity is inadmissible; LBP-05-19, 62 NRC 172 (2005)
a contention that constitutes an impermissible challenge to Commission regulations and fails to raise a material legal or factual issue is inadmissible; LBP-05-19, 62 NRC 170 (2005)
an inaccurate comparison of costs cannot be deemed to create a genuine dispute and is therefore inadmissible; LBP-05-19, 62 NRC 179 n.182 (2005)
at the contention admission stage, petitioner is not required to prove its case, but simply provide sufficient alleged factual or legal bases to support the contention; LBP-05-32, 62 NRC 824, 825 (2005)
contentions must show that a genuine dispute exists with regard to the license application in question, challenge and identify either specific portions of, or alleged omissions from, the application, and provide the supporting reasons for each dispute; LBP-05-19, 62 NRC 161, 162 (2005); LBP-05-28, 62 NRC 598 (2005); LBP-05-31, 62 NRC 750, 754, 759, 760, 761 (2005)
section 2.714(b)(2)(iii) is compared; LBP-05-19, 62 NRC 163 (2005)
10 C.F.R. 2.309(f)(2)
a component of intervenors' motion to amend a contention is inadmissible because it is not based upon data or conclusions that differ significantly from those in the applicant's documents; LBP-05-19, 62 NRC 172, 174, 175, 177, 178, 179 (2005)
consideration of the ''timing'' of submission of a contention does not eliminate the substantive requirements for considering the content of a new contention or an amendment to an existing contention; LBP-05-19, 62 NRC 161 (2005)

on issues arising under the National Environmental Policy Act, petitioners shall file contentions based on the applicant's environmental report, but may amend those contentions or file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement that differ significantly from the data or conclusions in the applicant's documents; CLI-05-20, 62 NRC 526 (2005)
the process for determining the admissibility of contentions based upon information that was not available at the time the petition was filed, as well as with situations in which new information is added to the record, is described; LBP-05-19, 62 NRC 160 (2005)
when a contention of omission is dismissed as moot, intervenor may file new or amended contentions challenging the adequacy of the documents that cured the omission in the original contention; LBP-05-24, 62 NRC 433 (2005)
10 C.F.R. 2.309(f)(2)(i)-(iii)
a new or amended contention may be filed upon a showing that the information was not previously available, is materially different than information previously available, and the amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information; LBP-05-32, 62 NRC 819-20 (2005)
10 C.F.R. 2.309(f)(2)(iv), (vi)
the requirement that data or conclusions differ significantly is inextricably intertwined with the requirements that the newly supplied information be material to the outcome of the proceeding; LBP-05-19, 62 NRC 163 (2005)
10 C.F.R. 2.309(f)(vi)
each contention must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute; LBP-05-27, 62 NRC 516-17 (2005)
10 C.F.R. 2.309(h)(2)
a reply brief is due 7 days after service of the licensee's/applicant's answer; CLI-05-26, 62 NRC 582 n.22 (2005)
intervention petitioners may not raise new issues in their reply briefs; LBP-05-31, 62 NRC 758 (2005)
10 C.F.R. 2.309(i)
a board is required to rule on any petition to intervene and/or request for hearing within 45 days of receiving the answers and replies associated with that petition and/or request; CLI-05-24, 62 NRC 568 (2005)
10 C.F.R. 2.310(a)
in an operating license amendment proceeding, the board must identify the specific hearing procedures to be used on a contention-by-contention basis; LBP-05-32, 62 NRC 825 (2005)
upon admission of a contention, the board must identify the specific hearing procedures to be used; LBP-05-32, 62 NRC 825 (2005)
10 C.F.R. 2.319
failure to properly serve counsel for the other participants in the litigation may result in the pleading being stricken; LBP-05-31, 62 NRC 743 n.13 (2005)
failure to request leave to substitute the amended pleading for the original and fully explain the differences between the amended pleading and the original, as well as the circumstances justifying the filing of the amended pleading, will ordinarily result in the second pleading being stricken; LBP-05-28, 62 NRC 593 (2005)
10 C.F.R. 2.319(k)
the board should make full use of its broad powers to resolve a remanded issue on a schedule consistent with the Commission's overall 30-month goal for completing the adjudication; CLI-05-20, 62 NRC 537 (2005)
10 C.F.R. 2.321(a)
NRC's revised rules call for hearings before either a three-judge board or an administrative law judge; CLI-05-23, 62 NRC 550 (2005)
10 C.F.R. 2.323
if an error or omission is noted by a litigant in a document that it has served and/or filed, the proper procedure is to file a document that is clearly marked as an amended or corrected version of the pleading, and to accompany that amended pleading with a motion requesting leave to substitute the amended pleading for the original; LBP-05-28, 62 NRC 593 (2005)

request for leave to substitute an amended pleading for the original should fully explain the differences between the amended pleading and the original, as well as the circumstances justifying the filing of the amended pleading; LBP-05-28, 62 NRC 593 (2005)

10 C.F.R. 2.323(a)

if parties believe that additional time for consultation may be productive, they are encouraged to advise the board and move for the enlargement of the 10-day time frame; LBP-05-33, 62 NRC 838 (2005)

listing of a document on a privilege log is the ''occurrence or circumstance'' that triggers the 10-day period for the filing of a motion challenging the asserted privilege; LBP-05-33, 62 NRC 837 (2005)

motions to compel document production must be filed within 10 days of the occurrence from which the motion arises; LBP-05-33, 62 NRC 836, 837 (2005)

10 C.F.R. 2.323(a)-(c)

within the 10-day filing deadline for a motion to compel a party must identify the occurrence or circumstance provoking the motion, make a sincere effort to consult the opposing party and resolve the matter, and research, draft, and file its motion; LBP-05-33, 62 NRC 838 (2005)

10 C.F.R. 2.323(b)

motions compel document production must be accompanied by a certification that the movant has made a sincere effort to contact and consult the other party before filing the motion; LBP-05-33, 62 NRC 836, 837 (2005)

the consultation requirement does not extend the 10-day filing requirement of section 2.323(a) and parties cannot, without approval of the board, agree to waive the 10-day rule applicable to the filing of motions; LBP-05-33, 62 NRC 838 (2005)

10 C.F.R. 2.323(c)

lack of sufficient information in the privilege log increases the chance that the moving party could not reasonably have anticipated the privilege claimant's arguments and thus should be granted a right to file a reply; LBP-05-33, 62 NRC 840 n.20 (2005)

10 C.F.R. 2.325

unless the presiding officer otherwise orders, the applicant or the proponent of an order has the burden of proof; LBP-05-27, 62 NRC 484 n.11 (2005)

when resolving contentions litigated through the adversary process, boards must decide, based on governing regulatory standards and the evidence submitted, whether the applicant has met its burden of proof (except where the NRC Staff has the burden); CLI-05-16, 62 NRC 39 (2005)

10 C.F.R. 2.335

NRC has long prohibited the use of adjudicatory proceedings to challenge the terms of regulations, but intervenors may seek a waiver of the rules; CLI-05-20, 62 NRC 536 (2005)

10 C.F.R. 2.335(a)

no rule or regulation of the Commission is subject to attack in any NRC adjudicatory proceeding; CLI-05-29, 62 NRC 812 (2005); LBP-05-28, 62 NRC 598 (2005); LBP-05-31, 62 NRC 751, 755, 756, 760 (2005)

10 C.F.R. 2.335(b)

an exemption is appropriate when a situation presents unusual circumstances that were not contemplated by the ''aging issues only'' regulation; LBP-05-16, 62 NRC 71 (2004)

for grant of an exemption or waiver of a rule, the movant must allege special circumstances that were not considered, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived; CLI-05-24, 62 NRC 560 (2005)

intervenor asks for a waiver of, or exception to, the Commission-imposed proscription against entertaining emergency planning issues; LBP-05-16, 62 NRC 62 (2004)

to grant an exemption or waiver of a rule, a board must first conclude that the rule's strict application would not serve the purposes for which it was adopted; CLI-05-24, 62 NRC 560 (2005)

10 C.F.R. 2.335(c)-(d)

a licensing board can deny a request for waiver of a regulation, but if the board thinks it might be meritorious, it must send it to the Commission; LBP-05-16, 62 NRC 62 (2004)

10 C.F.R. 2.335(d)

there is no provision for an appeal of an order certifying a question to the Commission, but the Commission may direct further proceedings as it considers appropriate to aid its determination; LBP-05-16, 62 NRC 75 (2004)

10 C.F.R. 2.335(e)
a petitioner may pursue its concerns about current emergency plans by filing a petition for rulemaking; CLI-05-24, 62 NRC 562 (2005)
10 C.F.R. 2.336
revised requirements for a tiered discovery process are intended to significantly reduce the delays and resources expended by all parties in discovery; CLI-05-23, 62 NRC 550 (2005)
10 C.F.R. 2.336(a)(2)
parties other than the Staff must disclose documents that are relevant to the contentions; LBP-05-33, 62 NRC 840 (2005)
10 C.F.R. 2.336(a)(4)
this provision was deleted because it required non-Staff parties to make disclosures that extended beyond the scope of the contested issues in the proceeding; LBP-05-33, 62 NRC 840 n.21 (2005)
10 C.F.R. 2.336(b)
NRC Staff is required to make documents available to parties in informal proceedings as mandatory disclosures; LBP-05-33, 62 NRC 841 (2005)
NRC Staff may withhold an otherwise discoverable document from mandatory disclosure only if it is a document for which there is a claim of privilege or protected status; LBP-05-33, 62 NRC 842 (2005)
Staff's mandatory disclosures in Subpart L proceedings must be made without further order or request from any party; LBP-05-33, 62 NRC 848 (2005)
10 C.F.R. 2.336(b)(1)-(5)
the scope of the Staff's duty to make mandatory disclosures is broader than the scope of its duty to provide the hearing file; LBP-05-33, 62 NRC 841 (2005)
10 C.F.R. 2.336(b)(3)
the scope of Staff's document disclosure obligations is discussed; LBP-05-33, 62 NRC 840 (2005)
10 C.F.R. 2.336(b)(5)
deliberative process privilege logs that do not provide sufficient information for assessing the claim of privilege make it difficult, if not impossible, for an opposing party to assess the validity of the privilege claim; LBP-05-33, 62 NRC 838 (2005)
Staff's decision to assert the deliberative process privilege occurs at the moment when the Staff first withholds the otherwise discoverable document and instead places it on the privilege log; LBP-05-33, 62 NRC 848 (2005)
10 C.F.R. 2.338
applicant and Staff have the absolute right to end settlement discussions simply by advising the board at any point that they do not want them to continue; LBP-05-16, 62 NRC 72 n.14 (2004)
the Commission encourages the fair and reasonable settlement and resolution of issues; LBP-05-16, 62 NRC 63 (2004); CLI-05-24, 62 NRC 568 (2005); LBP-05-18, 62 NRC 127 (2005)
10 C.F.R. 2.338(f)
Commission preference for use of parallel tracks (simultaneous adjudication and negotiation), which has the effect of spurring the parties to settlement, is implied by this regulation; CLI-05-24, 62 NRC 569 n.81 (2005)
10 C.F.R. 2.341(b)(4)
petitions for review must demonstrate the likelihood of clear error warranting plenary review; CLI-05-28, 62 NRC 723 (2005)
the Commission grants discretionary review of a board decision when the petition for review raises a substantial issue of law, a clearly erroneous finding of fact, or a prejudicial procedural error; CLI-05-29, 62 NRC 805 (2005)
10 C.F.R. 2.341(f)(1)
interlocutory Commission review of referred board rulings is permitted if the referral raises significant and novel legal or policy issues, and resolution of the issues would materially advance the orderly disposition of the proceeding; LBP-05-21, 62 NRC 539 (2005)
whether the USEC Privatization Act precludes a challenge to DOE cost estimates is the kind of broad legal question that ordinarily might warrant interlocutory appellate review, but the Commission declines review because, given the imminence of the upcoming Board hearing, review will not materially advance the disposition of the proceeding; LBP-05-21, 62 NRC 540 (2005)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 2.342(e)
in ruling on stay applications, a board considers irreparable harm, probability of success on the merits, harm to others, and the public interest; CLI-05-27, 62 NRC 718 n.14 (2005)
10 C.F.R. 2.343
the word ''hearing'' can refer to any of a number of events including paper hearings accompanied by oral arguments; CLI-05-16, 62 NRC 43 (2005)
10 C.F.R. 2.390(a)
NRC Staff should not withhold a document from disclosure in the absence of an NRC determination of a compelling reason for nondisclosure after a balancing of the interests of the person or agency urging nondisclosure and the public interest in disclosure; LBP-05-33, 62 NRC 842 (2005)
10 C.F.R. Part 2, Subpart G
the word ''hearing'' can refer to any of a number of events including trial-type evidentiary hearings; CLI-05-16, 62 NRC 42 (2005)
10 C.F.R. 2.705(b)(4)
when a party withholds information otherwise discoverable under these rules by claiming that it is subject to protection as trial preparation material, the party shall make the claim expressly and shall describe the nature of the documents, communications, or things not produced or disclosed in a manner that, without revealing information itself privileged or protected, will enable other parties to assess the applicability of the privilege or protection; LBP-05-27, 62 NRC 518 n.171 (2005)
10 C.F.R. 2.710(a)
any material facts set forth in the summary disposition movant's statement that are not controverted by a like statement of an opposing party are deemed admitted; LBP-05-19, 62 NRC 180 (2005)
10 C.F.R. 2.710(b)
a party opposing a summary disposition motion must put forth specific facts showing that there is a genuine issue of material fact to be litigated; LBP-05-19, 62 NRC 180 (2005)
10 C.F.R. 2.710(c)
the contention admissibility threshold is less than is required at the summary disposition stage; LBP-05-28, 62 NRC 597 (2005); LBP-05-31, 62 NRC 749 (2005)
10 C.F.R. 2.714
any individual, group, business, or governmental entity that wishes to intervene as a party in an adjudicatory proceeding addressing a proposed licensing action must file a timely written request to intervene, establish that it has standing, and offer at least one admissible contention; LBP-05-31, 62 NRC 743 n.16 (2005)
10 C.F.R. 2.714(b)(2)(iii)
section 2.309(f)(1)(vi) is compared; LBP-05-19, 62 NRC 163 (2005)
10 C.F.R. 2.715(c)
a special status is conferred on any state or local governments that wish to participate in some fashion in the adjudicatory process; LBP-05-16, 62 NRC 66 (2004)
10 C.F.R. 2.730
section 2.323 of the new rules is compared; LBP-05-33, 62 NRC 837 (2005)
10 C.F.R. 2.732
applicant bears the ultimate burden of proof in a licensing proceeding; LBP-05-21, 62 NRC 297 (2005)
10 C.F.R. 2.734
the standard for grant of reopening is described; LBP-05-20, 62 NRC 244 n.19 (2005)
10 C.F.R. 2.749(a), (d)
summary disposition may be entered with respect to any or all matters in a proceeding if the motion, with any appropriate supporting material, shows that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-05-20, 62 NRC 228 (2005)
10 C.F.R. 2.758(a)
challenge to an NRC regulation in an adjudicatory proceeding is not permitted; LBP-05-22, 62 NRC 363 (2005)
10 C.F.R. 2.764(c)
after the licensing board has issued a decision, it is up to the Commission to determine whether to authorize the NRC Staff to issue the requested license; LBP-05-29, 62 NRC 648, 656 n.33 (2005)

NRC Staff cannot issue a license to construct and operate an away-from-reactor ISFSI without express Commission authorization; CLI-05-19, 62 NRC 405, 424 n.93 (2005)
10 C.F.R. 2.786(b)(1)
the filing of a petition for review is mandatory in order for a party to have exhausted its administrative remedies before seeking judicial review; LBP-05-29, 62 NRC 700 (2005)
10 C.F.R. 2.786(b)(4)
the Commission will grant plenary appellate review of licensing board decisions if there is reason to believe that a board finding of material fact is clearly erroneous, a board legal conclusion is without governing precedent or is a departure from or is contrary to established law, or the Board committed a prejudicial procedural error; CLI-05-19, 62 NRC 410 (2005)
to obtain discretionary Commission review, petitioner must show ''a substantial question'' on the types of issues that may merit Commission review; CLI-05-16, 62 NRC 3 (2005)
10 C.F.R. 2.786(b)(4)(i)
absent a showing that the Board's fact-specific rulings were clearly erroneous, the Commission generally defers to the Board on matters of factual findings; CLI-05-16, 62 NRC 3 (2005)
10 C.F.R. 2.786(b)(5)
petitioner's last-minute challenge to the redaction of eleven passages in the hearing transcript offers no justification, as required under NRC rules governing late-filed arguments, why it should be permitted to raise this argument for the first time on appeal; CLI-05-16, 62 NRC 4 (2005)
10 C.F.R. 2.786(e)
a 10-day deadline is set for filing a petition for reconsideration of a Commission decision; CLI-05-19, 62 NRC 409 (2005)
10 C.F.R. 2.790
a party seeking a redaction shall at the same time provide a separate submission that describes with specificity (as supported by any necessary affidavits) the reasons for withholding each proposed redaction from the public; LBP-05-20, 62 NRC 247 (2005); LBP-05-21, 62 NRC 326 (2005); LBP-05-22, 62 NRC 371 (2005); LBP-05-23, 62 NRC 387 (2005)
portions of a decision may be withheld from public disclosure as proprietary information; LBP-05-20, 62 NRC 191 (2005)
10 C.F.R. 2.802
a petitioner may pursue its concerns about current emergency plans by filing a petition for rulemaking; CLI-05-24, 62 NRC 561, 565 (2005)
the appropriate means for requesting Commission consideration of generic issues is through rulemaking; CLI-05-24, 62 NRC 562 (2005)
10 C.F.R. 2.904
when necessary, a board can seek Commission appointment of an adjudicatory employee to assist the board in making safeguards redactions; CLI-05-22, 62 NRC 545 (2005)
10 C.F.R. 2.905(g)
intervenor's security clearances must be terminated at the conclusion of the proceeding; LBP-05-15, 62 NRC 54 (2005)
10 C.F.R. 2.1001
although the draft license application was in some sense ''relied'' upon by DOE for purposes of formulating the second draft, this is not the type of reliance required to constitute documentary material; LBP-05-27, 62 NRC 498 (2005)
''circulated drafts'' are defined as any nonfinal document circulated for supervisory concurrence or signature in which the original author or others in the concurrence process have non-concurred; CLI-05-27, 62 NRC 717 (2005); LBP-05-27, 62 NRC 486, 504, 510 (2005)
''circulated drafts'' include draft documents that eventually becomes final documents or drafts that do not become final documents due to either a decision not to finalize the document or the passage of a substantial period of time in which no action has been taken on the document; LBP-05-27, 62 NRC 513 (2005)
''documentary material'' covers Class 1 reliance documentary material, Class 2 nonsupporting documentary material, and Class 3 relevant reports and studies documentary material; LBP-05-27, 62 NRC 486, 496 (2005)

''documentary material'' includes all reports and studies, prepared by or on behalf of a potential party, including all related circulated drafts; CLI-05-27, 62 NRC 717 (2005)
given that the regulation speaks in terms of a document being circulated for ''concurrence or signature,'', it is clear that ''concurrence'' does not mean ''signature''; LBP-05-27, 62 NRC 506 (2005)
if a document falls within any of the three classes of documentary material, then its full text must be made available on the Licensing Support Network; LBP-05-27, 62 NRC 486 (2005)
''preliminary drafts'' are defined negatively as any nonfinal document that is not a circulated draft; LBP-05-27, 62 NRC 486, 503 (2005)
the definition of ''nonsupporting'' documentary material is any information that is known to, and in the possession of, or developed by the party that is relevant to, but does not support, Class 1 information or that party's position; LBP-05-27, 62 NRC 499 (2005)
the draft license application satisfies all five of the elements of the regulatory definition of circulated draft; LBP-05-27, 62 NRC 511 (2005)
the passage in the Statement of Considerations indicating that the nonconcurrence must be unresolved, is inconsistent with the words of the regulation, which speaks in the past tense and states that a person must have nonconcurred; LBP-05-27, 62 NRC 513 (2005)
the ''reliance category'' of documentary material applies to any information upon which a potential party intends to rely and/or cite in support of its position in the proceeding; LBP-05-27, 62 NRC 498 (2005)
the term ''concurrence process'' is construed as a process whereby management reviews a document for substantive agreement or disagreement; LBP-05-27, 62 NRC 508 (2005)
the word ''concurrence,'' appears, in some form, three times in the definition of circulated draft; LBP-05-27, 62 NRC 506 (2005)
10 C.F.R. 2.1003(a)
deadline for NRC Staff's certification of documentary material on the Licensing Support Network is 30 days after DOE's certification; CLI-05-27, 62 NRC 719 n.19 (2005)
DOE must make its certification of the availability of required documents at least 6 months prior to submitting its license application; CLI-05-27, 62 NRC 716 n.3 (2005)
DOE must make its ''documentary material'' available on the Licensing Support Network; LBP-05-27, 62 NRC 496 (2005)
each participant must place on the Licensing Support Network all documentary material, including circulated drafts but excluding preliminary drafts, on which the participant intends to rely or that are relevant; CLI-05-27, 62 NRC 717 (2005)
10 C.F.R. 2.1003(a)(1)
during the pre-license application phase, DOE must make all of its documentary material pertaining to Yucca Mountain available on the Licensing Support Network; LBP-05-27, 62 NRC 486 (2005)
if a document falls within any of the three classes of documentary material, then its full text must be made available on the Licensing Support Network; LBP-05-27, 62 NRC 486 (2005)
parties shall make available all documentary material (including circulated drafts but excluding preliminary drafts); LBP-05-27, 62 NRC 503 (2005)
the full text of preliminary drafts need not be made available on the Licensing Support Network; LBP-05-27, 62 NRC 486 (2005)
unless otherwise privileged (e.g., litigation work product), circulated drafts must be produced in full text as documentary material; LBP-05-27, 62 NRC 487 (2005)
10 C.F.R. 2.1003(a)(4)(i)
a participant is not required to produce the full text of documentary material that is subject to a claim of privilege, but instead must produce only an electronic bibliographic header for the document; LBP-05-27, 62 NRC 487 (2005)
10 C.F.R. 2.1003(b)
DOE must make its ''basic licensing documents'' available on Licensing Support Network; LBP-05-27, 62 NRC 496 (2005)
the definition of ''documentary material'' counsels against interpreting ''documentary material'' and ''basic licensing documents'' as mutually exclusive categories; LBP-05-27, 62 NRC 497 (2005)
this subsection is primarily intended to provide direction as to who is responsible for making these very large documents, which will be in the hands of multiple parties, electronically available on the Licensing Support Network; LBP-05-27, 62 NRC 497 (2005)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 2.1006
if a document is protected by one of the NRC's traditional discovery privileges (e.g., attorney-client, litigation work product, or deliberative process), only its header need be made available on the Licensing Support Network; LBP-05-27, 62 NRC 487 (2005)
10 C.F.R. 2.1006(c)
circulated drafts are not eligible for the deliberative process privilege; LBP-05-27, 62 NRC 487, 518 (2005)
10 C.F.R. 2.1009(b)
deadline for NRC Staff's certification of documentary material on the Licensing Support Network is 30 days after DOE's certification; CLI-05-27, 62 NRC 719 n.19 (2005)
each potential party must certify to the Pre-License Application Presiding Officer that it has made available the documents identified in section 2.1003; CLI-05-27, 62 NRC 716 n.3 (2005)
10 C.F.R. 2.1012(a)
for NRC to meet the 3-year statutory deadline for issuing a final decision on DOE's HLW repository license application, DOE and other potential parties must participate in a pre-license application document discovery phase during the period before NRC will ''docket'' DOE's license application; LBP-05-27, 62 NRC 486 (2005)
without a valid 2004 certification, the NRC cannot docket DOE's license application; LBP-05-27, 62 NRC 494-95 (2005)
10 C.F.R. 2.1018(b)
depositions and interrogatories are not available during the pre-license application phase; LBP-05-27, 62 NRC 513 n.150 (2005)
10 C.F.R. 2.1018(b)(2)
a party may obtain discovery of documentary material otherwise discoverable under paragraph (b)(1) of this section and prepared in anticipation of, or for the hearing by, or for another party's representative only upon a showing that the party seeking discovery has substantial need of the materials in the preparation of its case and that it is unable without undue hardship to obtain the substantial equivalent of the materials by other means; LBP-05-27, 62 NRC 519 (2005)
10 C.F.R. 2.1019(i)(2)(iv)
even if a draft license amendment is a preliminary draft, this merely postpones the day of reckoning during derivative discovery, when the litigation work product privilege claim must be confronted again; LBP-05-27, 62 NRC 518 n.174 (2005)
10 C.F.R. 2.1113
the word ''hearing'' can refer to any of a number of events including paper hearings accompanied by oral arguments; CLI-05-16, 62 NRC 43 (2005)
10 C.F.R. 2.1203
revised requirements for a tiered discovery process are intended to significantly reduce the delays and resources expended by all parties in discovery; CLI-05-23, 62 NRC 550 (2005)
10 C.F.R. 2.1203(b)
the scope of the Staff's duty to make mandatory disclosures is broader than the scope of its duty to provide the hearing file; LBP-05-33, 62 NRC 841 (2005)
10 C.F.R. 2.1203(d)
NRC Staff is required to make documents available to parties in informal proceedings as mandatory disclosures; LBP-05-33, 62 NRC 841 (2005)
parties are generally prohibited from seeking discovery in informal proceedings; LBP-05-33, 62 NRC 841 (2005)
10 C.F.R. 2.1205
a licensing board may grant summary disposition as to all or any part of a proceeding if the board finds that the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-05-19, 62 NRC 180 n.186 (2005)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 2.1205(*l*)(2)
if a petition to intervene and request for a hearing in a licensing proceeding does not satisfy the legal requirements for a hearing or intervention, the Atomic Safety and Licensing Board Panel or the Presiding Officer may refer the request to the section 2.206 process; DD-05-2, 62 NRC 390-91 (2005)
10 C.F.R. 2.1206, 2.1207
under the ''new'' Part 2 rules, if a Subpart L hearing is granted, it will be conducted as an oral hearing; CLI-05-23, 62 NRC 549 (2005)
10 C.F.R. 2.1207(a)(1)
intervenors and other parties may submit written testimony only on admitted contentions; CLI-05-16, 62 NRC 49 (2005)
10 C.F.R. 2.1209
intervenors and other parties may submit proposed findings of fact and conclusions of law relevant only to those contentions that were addressed in the oral hearing; CLI-05-16, 62 NRC 49 (2005)
10 C.F.R. 2.1233
even under the prior rules, to effectively participate in a decommissioning proceeding, petitioner would be required to state its objections with sufficient particularity and factual support; CLI-05-23, 62 NRC 549 (2005)
under the ''old'' Part 2 rules, a Subpart L proceeding consisted of written presentations, with an opportunity to request oral presentations only upon the presiding officer's determination that such presentations would be necessary to create an adequate record for decision; CLI-05-23, 62 NRC 549 (2005)
10 C.F.R. 2.1233(c)
intervenors must submit a written presentation that describes in detail any deficiency or omission in the license application, with a detailed statement of reasons why any particular sections or portion is deficient; LBP-05-17, 62 NRC 98 (2005)
10 C.F.R. 2.1235
under the ''old'' Part 2 rules, a Subpart L proceeding consisted of written presentations, with an opportunity to request oral presentations only upon the presiding officer's determination that such presentations would be necessary to create an adequate record for decision; CLI-05-23, 62 NRC 549 (2005)
10 C.F.R. 2.1305
NRC Staff is directed to consider petitioner's late-filed contentions and supplemental filing as if they were written comments under; CLI-05-26, 62 NRC 584 (2005)
10 C.F.R. 2.1500 *et seq.*
the word ''hearing'' can refer to any of a number of events including hearings employing a mixture of procedural rules; CLI-05-16, 62 NRC 43 (2005)
10 C.F.R. Part 2, Appendix A, § V(f)(1) (2004)
if only a portion of a proceeding's issues are in dispute, it makes no sense for a licensing board to proceed as if the entire adjudication is contested, with consequently greater demands on the parties' and the board's time and resources; CLI-05-16, 62 NRC 36 (2005)
10 C.F.R. Part 2, Appendix A, § VI(b), (d)
the Atomic Energy Commission made clear the issue-by-issue nature of boards' ''mandatory'' decisionmaking duties; CLI-05-16, 62 NRC 35 n.40 (2005)
10 C.F.R. 20.1002, 20.1101(a)
license renewal applicants are bound by the NRC regulatory requirements for radiation monitoring; LBP-05-31, 62 NRC 754 (2005)
10 C.F.R. 20.1201(e), 20.1302(b)
NRC requires documentation and reporting of releases and exposure to radioactive substances and specifically establishes exposure limits for uranium, including hexavalent uranium trioxide; DD-05-8, 62 NRC 875 (2005)
10 C.F.R. Part 20, Subpart E
petitioner's request for remediation and mitigation of conditions resulting from test-firing of DU munitions is considered insofar as it relates to the decontamination and decommissioning of nuclear facilities; DD-05-8, 62 NRC 871 (2005)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. Part 20, Appendix B
regulatory limits for uranium are discussed; DD-05-8, 62 NRC 869, 871, 872 (2005)
10 C.F.R. 40.4
byproduct material from ISL mining operations is required to be disposed of at existing large mill tailings disposal sites unless, given the nature of the waste and the costs and environmental impacts of transporting the waste, offsite disposal is impracticable or there are clear advantages to onsite burial; LBP-05-17, 62 NRC 111 (2005)
10 C.F.R. 40.9(a)
for a licensee statement to be treated as a false or inaccurate statement subject to NRC enforcement, the statement must be made to NRC, and it must be material to NRC; DD-05-8, 62 NRC 878 (2005)
10 C.F.R. 40.10(a)(2)
for a licensee statement to be treated as a false or inaccurate statement subject to NRC enforcement, the statement must be made to NRC, and it must be material to NRC; DD-05-8, 62 NRC 878 (2005)
10 C.F.R. 40.32(e)
beginning construction of process facilities or well fields before the Staff has concluded that the appropriate action is to issue the proposed license is grounds for denial of the application; LBP-05-17, 62 NRC 94 n.11 (2005)
10 C.F.R. 40.42
petitioner's request for remediation and mitigation of conditions resulting from test-firing of DU munitions is considered insofar as it relates to the decontamination and decommissioning of nuclear facilities; DD-05-8, 62 NRC 871 (2005)
10 C.F.R. Part 40, Appendix A, Criterion 2
byproduct material from ISL mining operations is required to be disposed of at existing large mill tailings disposal sites unless, given the nature of the waste and the costs and environmental impacts of transporting the waste, offsite disposal is impracticable or there are clear advantages to onsite burial; LBP-05-17, 62 NRC 115 (2005)
10 C.F.R. Part 40, Appendix A, Criterion 9
applicant is required to establish financial surety arrangements to carry out the decontamination and decommissioning of a site; LBP-05-17, 62 NRC 115 (2005)
10 C.F.R. 50.2
''design bases'' means the information that identifies the specific functions to be performed by a structure, system, or component of a facility, and the specific values or ranges of values chosen for controlling parameters as reference bounds for design; DD-05-2, 62 NRC 394 (2005)
10 C.F.R. 50.9(a)
information provided to the Commission by a licensee shall be complete and accurate in all material respects; DD-05-6, 62 NRC 857, 858 (2005)
10 C.F.R. 50.10(c)(1) and (2)
applicant is allowed to engage in preconstruction activities such as site exploration and the procurement or manufacture of facility components before obtaining a construction permit from the agency; LBP-05-21, 62 NRC 276, 308 (2005)
10 C.F.R. 50.34(b)
a final safety analysis report must include information that describes the facility, presents the design bases and the limits on its operation, and presents a safety analysis of the structures, systems, and components and of the facility as a whole; DD-05-2, 62 NRC 394 (2005)
10 C.F.R. 50.36a
license renewal applicants are bound by the NRC regulatory requirements for radiation monitoring; LBP-05-31, 62 NRC 754 (2005)
10 C.F.R. 50.47(a)(1)
emergency planning issues are not germane to license renewal determinations; CLI-05-18, 62 NRC 186 (2005); CLI-05-24, 62 NRC 555, 559, 567 (2005); LBP-05-16, 62 NRC 70 (2004); LBP-05-31, 62 NRC 762 (2005)
10 C.F.R. 50.47(a)(1)
to grant an exemption or waiver of this regulation, thereby permitting the adjudication of emergency-planning issues in a license renewal proceeding, a board must first conclude that the rule's

strict application would not serve the purposes for which it was adopted; CLI-05-24, 62 NRC 559 (2005)
10 C.F.R. 50.47(b)(5)
backup route alerting completed within 45 minutes of detection of a failure of the primary alert and notification system meets the intent for prompt public notification; DD-05-3, 62 NRC 770, 780 (2005)
licensee's method of distributing tone-alert radios to members of the public outside the area covered by sirens is identified as a violation because it does not meet the intent of the design basis for the alert and notification system; DD-05-3, 62 NRC 770, 775 (2005)
10 C.F.R. 50.47(c)(2)
population density, anticipated changes in population, geographical limitations, and roadway limitations are relevant to an emergency plan's strength and workability; CLI-05-24, 62 NRC 559 (2005)
10 C.F.R. 50.54(q)
nuclear power plant licensees must follow and maintain in effect emergency plans that meet the standards in section 50.47(b) and the requirements in Part 50, Appendix E; DD-05-3, 62 NRC 768 (2005)
10 C.F.R. 50.54(w)
operating nuclear power reactors must have insurance coverage in the amount of $1.06 billion or the amount generally available from private sources, whichever is less; LBP-05-21, 62 NRC 273, 294, 299-300, 323 (2005)
Part 72 ISFSI licensees, like Part 50 nuclear reactor licensees, face no requirement for including potential accident recovery costs within decommissioning cost estimates; LBP-05-22, 62 NRC 368 (2005)
10 C.F.R. 50.59
the safety review process, by which changes to a plant and its operating procedures subsequent to initial licensing are evaluated, provides an adequate basis for concluding that the plant continues to meet the licensing bases; DD-05-2, 62 NRC 396 (2005)
10 C.F.R. 50.71(e)
designation of an Updated Final Safety Analysis Report appendix as historical information is consistent with applicable industry guidance and meets this regulation's intent regarding maintenance of design basis information, if the relevant information, consistent with the definition of ''design bases'' in section 50.2, is contained in other portions of the UFSAR that are not designated as historical; DD-05-2, 62 NRC 392-95 (2005)
operators of nuclear power plants must periodically update the final safety analysis report originally submitted as part of the application for the operating license, to assure that the information included in the report contains the latest information developed; DD-05-2, 62 NRC 393 (2005)
10 C.F.R. Part 50, Appendix A
the final general design criteria are not new requirements, but were promulgated to more clearly articulate the licensing requirements and the practices in effect at that time; DD-05-2, 62 NRC 392 (2005)
10 C.F.R. Part 50, Appendix B, Criterion XVI
NRC's approach to protecting public health and safety is based on the philosophy of defense-in-depth; DD-05-2, 62 NRC 399 (2005)
performance deficiencies of the 1C cold leg loop stop isolation valve and any failure to timely identify and correct those deficiencies do not constitute a violation; DD-05-5, 62 NRC 797, 798 (2005)
10 C.F.R. Part 50, Appendix E, § IV.D.3
backup route alerting completed within 45 minutes of detection of a failure of the primary alert and notification system meets the intent for prompt public notification; DD-05-3, 62 NRC 770, 780 (2005)
10 C.F.R. Part 50, Appendix R
petitioner's concern with the quality of the fire barriers is resolved by licensee's replacement of Hemyc in systems that are credited in the plant safe shutdown capability analysis; DD-05-7, 62 NRC 863, 865 (2005)
10 C.F.R. Part 50, Appendix S, para. I(a)
petitioner alleges that applicant has failed to provide adequate analysis to demonstrate that the alternate cooling system, under uprate conditions, will be able to withstand the effects of an earthquake and other natural phenomena without losing its safety capabilities; LBP-05-32, 62 NRC 823 (2005)
10 C.F.R. Part 51
an agency's assessment of environmental impacts requires an assessment of historic and cultural resources; LBP-05-26, 62 NRC 450 (2005)

an environmental report is not required to include a decommissioning plan or a decommissioning funding plan; LBP-05-28, 62 NRC 614 (2005)
the Staff is required to consider the potential environmental effects of any proposed major federal action significantly affecting the quality of the human environment; LBP-05-19, 62 NRC 154 (2005)
there is no requirement in NEPA to complete the National Historic Preservation Act review in order to satisfy the obligations imposed by NEPA; LBP-05-26, 62 NRC 472 (2005)
10 C.F.R. Part 51, Subpart A, Appendix B, Table B-1
to fall within the scope of a license renewal proceeding, events that could contaminate a city's drinking water would have to be either design-basis accidents or severe accidents; LBP-05-31, 62 NRC 758 (2005)
10 C.F.R. 51.23
an applicant is permitted to rely on the Waste Confidence Rule for its findings regarding waste disposal; LBP-05-19, 62 NRC 174, 175 (2005)
10 C.F.R. 51.45
an applicant for a license renewal is required to prepare an environmental report that must discuss the environmental impacts of its proposed action and compare these impacts to alternatives, including the no-action alternative; LBP-05-31, 62 NRC 752, 753 (2005)
applicant must present a discussion of alternatives in its environmental report; LBP-05-31, 62 NRC 753 (2005)
10 C.F.R. 51.45(b)
''description of the environment affected'' means an inventory of resources in the general area surrounding a project that can reasonably be expected to be affected by the project; LBP-05-28, 62 NRC 622 n.140 (2005)
applicant's environmental report must contain a description of the proposed action, a statement of its purposes, and a description of the environment affected; LBP-05-19, 62 NRC 154 (2005)
applicant's environmental report must discuss the potential impact on the historic and cultural resources in the area surrounding its projected site; LBP-05-28, 62 NRC 622 (2005)
applicant's environmental report must identify only sites that can reasonably be expected to be affected by the proposed federal action, thereby alerting NRC to the need to examine the potential impacts upon those sites; LBP-05-28, 62 NRC 624 (2005)
the purpose of this regulation is to identify resources for the NRC Staff, including cultural and historic resources, that could reasonably be expected to be adversely affected so the NRC can meet its obligations under NEPA and other relevant environmental statutes; LBP-05-28, 62 NRC 622-23 (2005)
there is no basis for construing the regulation to require identification of every portion of the environment that might, even in the remotest of possibilities, be affected; LBP-05-28, 62 NRC 623-24 (2005)
10 C.F.R. 51.45(b)(1)
an environmental report must discuss the impact of the proposed action on the environment, with impacts discussed in proportion to their significance; LBP-05-19, 62 NRC 155 (2005)
10 C.F.R. 51.45(b)(3)
an environmental report must discuss alternatives to the proposed action, with that discussion being sufficiently complete to aid the Commission in developing and exploring appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources; LBP-05-19, 62 NRC 144, 155 (2005); LBP-05-28, 62 NRC 629 (2005); LBP-05-31, 62 NRC 753 (2005)
10 C.F.R. 51.45(c)
the analysis in the environmental report must consider and balance the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects including consideration of the economic, technical, and other benefits and costs of the proposed action and of alternatives; LBP-05-19, 62 NRC 155 (2005)
with regard to uncertainties in data or assumptions in the environmental report, the analysis shall, to the fullest extent practicable, quantify the various factors considered, but shall discuss factors that cannot be quantified in qualitative terms; LBP-05-19, 62 NRC 155 (2005)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 51.51
an applicant is permitted to rely upon Table S-3 to evaluate the effects of the uranium fuel cycle; LBP-05-19, 62 NRC 174 (2005)
10 C.F.R. 51.53(c)
an applicant for a license renewal is required to prepare an environmental report that must discuss the environmental impacts of its proposed action and compare these impacts to alternatives, including the no-action alternative; LBP-05-31, 62 NRC 752, 753 (2005)
review of environmental issues in an operating license renewal proceeding is generally limited by this regulation; LBP-05-31, 62 NRC 748 (2005)
10 C.F.R. 51.70(a)
the ''hard look'' required by NEPA is not to be equated with completion of the NHPA review; LBP-05-26, 62 NRC 472 (2005)
10 C.F.R. 51.70(b)
Staff may rely on the environmental report in preparation of its environmental impact statement, but it must also independently evaluate and be responsible for the reliability of all information used in the EIS; LBP-05-19, 62 NRC 155 (2005)
10 C.F.R. 51.71(d)
a draft environmental impact statement should include consideration of the economic, technical, and other benefits and costs of the proposed action and alternatives and indicate what other interests and considerations of federal policy, including factors not related to environmental quality if applicable, are relevant to the consideration of environmental effects of the proposed action; LBP-05-19, 62 NRC 155 (2005)
NRC Staff is obliged to analyze alternatives to a proposed federal action; CLI-05-16, 62 NRC 48 (2005)
review of environmental issues in an operating license renewal proceeding is generally limited by this regulation; LBP-05-31, 62 NRC 748 (2005)
10 C.F.R. 51.95(c)
review of environmental issues in an operating license renewal proceeding is generally limited by this regulation; LBP-05-31, 62 NRC 748 (2005)
10 C.F.R. 51.97
the NEPA cost-benefit analysis is postponed until the combined operating license phase of licensing; CLI-05-16, 62 NRC 47 (2005)
10 C.F.R. 51.105(a)(1)-(3)
licensing boards must reach their own independent determination on uncontested NEPA ''baseline'' questions; CLI-05-16, 62 NRC 30, 45 (2005)
10 C.F.R. 51.105(a)(2)
the Board's NEPA analysis is limited to material contained in the record of the proceeding; CLI-05-16, 62 NRC 44, 47 (2005)
10 C.F.R. 51.105(a)(3)
boards are obliged to consider reasonable alternatives to a proposed federal action; CLI-05-16, 62 NRC 48 (2005)
boards must weigh benefits against costs; CLI-05-16, 62 NRC 46 (2005)
10 C.F.R. 51.105(a)(5)
factors that a licensing board is required to consider for hearings on contested applications are discussed; CLI-05-16, 62 NRC 30 (2005)
factors that a licensing board is required to determine for hearings on uncontested applications are discussed; CLI-05-16, 62 NRC 30 (2005)
10 C.F.R. Part 51, Appendix A
an applicant for a license renewal is required to prepare an environmental report that must discuss the environmental impacts of its proposed action and compare these impacts to alternatives, including the no-action alternative; LBP-05-31, 62 NRC 753 (2005)
the range of NEPA alternatives to an operating license renewal that NRC must consider involve only those for providing baseload generating capacity and the ''no-action'' alternative; LBP-05-31, 62 NRC 753 (2005)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. Part 51, Appendix B
use by the Staff of the categorizations of SMALL, MODERATE, and LARGE is permissible under the NRC's regulations; LBP-05-19, 62 NRC 171-72 (2005)
10 C.F.R. Part 52, Subpart A
an application for an early site permit allows the applicant, the Staff, and other interested parties to address certain key site-related environmental, safety, and emergency planning issues before the applicant has made the decision to build or has selected the specific design of a potential facility on that site; LBP-05-19, 62 NRC 147 (2005)
10 C.F.R. 52.17
an early site permit applicant is required to file an environmental report with its application; LBP-05-19, 62 NRC 154 (2005)
10 C.F.R. 52.17(a)(2)
a board need not address alternative energy sources in a mandatory early site permit hearing; CLI-05-29, 62 NRC 806 n.24 (2005)
an economics-driven cost comparison among alternative technologies is a matter that is postponed until the construction permit/operating license stage; CLI-05-29, 62 NRC 811 (2005)
an environmental report need not include a discussion of the need for power; CLI-05-29, 62 NRC 803 (2005)
an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed is required; CLI-05-16, 62 NRC 48 (2005)
at the ESP stage of the construction permit process, the boards' ''reasonable alternatives'' responsibilities are limited because the proceeding is focused on an appropriate site, not the actual construction of a reactor, and thus boards must merely weigh and compare alternative sites, not other types of alternatives (such as alternative energy sources); CLI-05-16, 62 NRC 48 (2005)
energy efficiency is a surrogate for the ''need for power,'' and thus need not be discussed in applicant's environmental report; CLI-05-29, 62 NRC 805 (2005); LBP-05-19, 62 NRC 159 (2005)
in an early site permit case, neither the environmental report nor the draft environmental impact statement needs to include an assessment of the benefits of the proposed action; LBP-05-19, 62 NRC 155, 167, 170, 177 n.167 (2005)
licensing boards in pending early site permit cases cannot perform cost-benefit ''weighing'' because an early site permit is only a ''partial'' construction permit and this regulation explicitly exempts both the NRC Staff and the applicant from assessing the ESP's benefits; CLI-05-16, 62 NRC 47 (2005)
10 C.F.R. 52.18
a board need not address alternative energy sources in a mandatory early site permit hearing; CLI-05-29, 62 NRC 806 n.24 (2005)
an economics-driven cost comparison among alternative technologies is a matter that is postponed until the construction permit/operating license stage; CLI-05-29, 62 NRC 811 (2005)
an evaluation of alternative sites to determine whether there is any obviously superior alternative to the proposed site is required; CLI-05-16, 62 NRC 48 (2005)
at the early site permit stage of the construction permit process, the boards' ''reasonable alternatives'' responsibilities are limited because the proceeding is focused on an appropriate site, not the actual construction of a reactor, and thus boards must merely weigh and compare alternative sites, not other types of alternatives (such as alternative energy sources); CLI-05-16, 62 NRC 48 (2005)
energy efficiency is a surrogate for the ''need for power,'' and thus need not be discussed in applicant's environmental report; CLI-05-29, 62 NRC 805 (2005); LBP-05-19, 62 NRC 159 (2005)
in an early site permit case, neither the environmental report nor the draft environmental impact statement needs to include an assessment of the benefits of the proposed action; LBP-05-19, 62 NRC 167, 170 (2005)
licensing boards in pending early site permit cases cannot perform cost-benefit ''weighing'' because an early site permit is only a ''partial'' construction permit and this regulation explicitly exempts both the NRC Staff and the applicant from assessing the ESP's benefits; CLI-05-16, 62 NRC 47 (2005)
the Staff shall review the environmental report and prepare a draft environmental impact statement; LBP-05-19, 62 NRC 155 (2005)
10 C.F.R. 52.21
early site permits are partial construction permits; CLI-05-16, 62 NRC 26 (2005)

hearings are mandatory for early site permits; CLI-05-16, 62 NRC 28 (2005)
licensing boards in pending early site permit cases cannot perform cost-benefit ''weighing'' because an early site permit is only a ''partial'' construction permit and this regulation explicitly exempts both the NRC Staff and the applicant from assessing the ESP's benefits; CLI-05-16, 62 NRC 47 (2005)
10 C.F.R. 52.79(a)(1), 52.89
the NEPA cost-benefit analysis is postponed until the combined operating license phase of licensing; CLI-05-16, 62 NRC 47 (2005)
10 C.F.R. 54.13
information provided by an applicant for a license renewal must be complete and accurate in all material respects; DD-05-6, 62 NRC 859, 860 (2005)
10 C.F.R. 54.21, 54.22
review of technical issues in an operating license renewal proceeding is generally limited to a review of plant structures and components that will require an aging management review for the proposed extended period of operation; LBP-05-31, 62 NRC 748 (2005)
10 C.F.R. 54.23
an applicant for a license renewal is required to prepare an environmental report that must discuss the environmental impacts of its proposed action and compare these impacts to alternatives, including the no-action alternative; LBP-05-31, 62 NRC 753 (2005)
review of environmental issues in an operating license renewal proceeding is generally limited by this regulation; LBP-05-31, 62 NRC 748 (2005)
10 C.F.R. 54.29
review of technical issues in an operating license renewal proceeding is generally limited to a review of plant structures and components that will require an aging management review for the proposed extended period of operation; LBP-05-31, 62 NRC 748 (2005)
10 C.F.R. Part 61
contention questions whether the engineered-trench near-surface disposal method is acceptable for depleted uranium; CLI-05-20, 62 NRC 534 (2005)
disposal of large quantities of depleted uranium at near-surface facilities may not meet regulatory requirements; CLI-05-20, 62 NRC 533 n.48 (2005)
10 C.F.R. 61.55
petitioner's disposal ''impacts'' contention challenges the DEIS's classification of depleted uranium as a Class A low-level radioactive waste; CLI-05-20, 62 NRC 535 (2005)
10 C.F.R. 61.55(a)(6)
if radioactive waste does not contain any of the radionuclides listed in either of two waste classification tables, it is Class A waste; CLI-05-20, 62 NRC 535-36 (2005)
10 C.F.R. 63.21-63.24
DOE's draft license application does not qualify for the litigation work product privilege because it was prepared for the independent regulatory purpose of meeting NRC's license application requirements, and not because of an anticipated hearing or litigation; LBP-05-27, 62 NRC 496 (2005)
10 C.F.R. 70.22(i)(1)(ii)
the requirement that the applicant develop an emergency plan has nothing to do with petitioner's allegation that applicant has failed to adequately consider the impacts or likelihood of a ''domino effect'' event; LBP-05-28, 62 NRC 605 (2005)
10 C.F.R. 70.23a
hearings are mandatory for construction of uranium enrichment facilities; CLI-05-16, 62 NRC 28 (2005)
10 C.F.R. 70.24
licensee seeks an exemption from criticality accident alarm system requirements because the amount of uranium-235 in the cylinder storage yards would exceed the threshold for maintenance of the CCAS; LBP-05-28, 62 NRC 599-600 (2005)
10 C.F.R. 70.25(e)
a decommissioning funding plan must contain only a cost estimate for decommissioning and a description of the method for assuring funds for decommissioning; LBP-05-28, 62 NRC 614 (2005)
a decommissioning funding plan submitted with the application is not required to include statements from disposal facilities indicating that they will accept ACP wastes; LBP-05-28, 62 NRC 614 (2005)

10 C.F.R. 70.31(e)
hearings are mandatory for construction of uranium enrichment facilities; CLI-05-16, 62 NRC 28 (2005)
10 C.F.R. 70.38(d)
a decommissioning plan is not required to be submitted until the license expires or the licensee has ceased principal operation; LBP-05-28, 62 NRC 614 (2005)
10 C.F.R. Part 72
in the context of an ISFSI licensing proceeding, license conditions could be an acceptable method for providing reasonable assurance of an applicant's financial qualifications; LBP-05-21, 62 NRC 298 (2005)
10 C.F.R. 72.22(e)
an ISFSI applicant must submit sufficient information to demonstrate its financial qualifications to carry out the activities for which the license is sought; LBP-05-21, 62 NRC 272, 297 (2005)
applicant commitments to demonstrate sufficient funding for construction and service agreements with prices to cover operation, maintenance, and decommissioning costs over the entire license term renders claimed concerns about market adequacy immaterial to the requisite reasonable assurance finding; LBP-05-20, 62 NRC 239 (2005)
applicant must have the necessary funds available to cover estimated construction costs and estimated operating costs over the planned life of the facility; LBP-05-21, 62 NRC 272 (2005)
applicant need not provide estimated O&M cost estimates broken down by the year in which they are expected to occur to fulfill its financial assurance requirements; LBP-05-21, 62 NRC 284, 315, 316 (2005)
information that must be included in an application for an ISFSI is described; LBP-05-22, 62 NRC 346 (2005)
license conditions could appropriately be used to establish compliance with the financial assurance requirements; LBP-05-21, 62 NRC 260 (2005); LBP-05-23, 62 NRC 376 (2005)
Staff should not be involved in post-license review of complex financial assurance determinations; LBP-05-20, 62 NRC 223 (2005)
the requirement that an applicant must demonstrate reasonable financial assurance refers only to construction costs, not to preconstruction costs; LBP-05-21, 62 NRC 308 (2005)
10 C.F.R. 72.24(d)(2)
independent spent fuel storage installations must be able to withstand ''credible'' accidents; CLI-05-19, 62 NRC 406 (2005)
10 C.F.R. 72.30(a)
applicant has the burden of proof to show that it meets the decommissioning plan requirements by providing reasonable assurance that there is sufficient funding for site decommissioning and that the plan protects the health and safety of the public; LBP-05-22, 62 NRC 332 (2005)
10 C.F.R. 72.30(a)-(b), (d)
information that must be included in a decommissioning plan for an ISFSI is described; LBP-05-22, 62 NRC 346-48 (2005)
10 C.F.R. 72.30(b)
a preliminary decommissioning plan must include means of adjusting cost estimates and associated funding levels periodically over the life of the ISFSI; LBP-05-22, 62 NRC 363 (2005)
an applicant for an ISFSI license is required to include in its decommissioning plan a mechanism for periodically reviewing and adjusting its decommissioning cost estimates during the life of the ISFSI; LBP-05-22, 62 NRC 348 (2005)
10 C.F.R. 72.30(c)
applicant has the burden of proof to show that it meets the decommissioning plan requirements by providing reasonable assurance that there is sufficient funding for site decommissioning and that the plan protects the health and safety of the public; LBP-05-22, 62 NRC 332 (2005)
ISFSI applicants are required to perform periodic rather than annual reviews of their decommissioning cost estimates; LBP-05-22, 62 NRC 363 (2005)
ISFSI applicants must provide decommissioning financial assurance through prepayment, a guarantee method, or an external sinking fund coupled with a guarantee method; LBP-05-22, 62 NRC 349-50, 351, 362, 365 (2005)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 72.30(c)(1)
if the cost for storage cask decommissioning is prepaid by applicant's customers, the payment is held in an external escrow account; LBP-05-22, 62 NRC 361, 367 (2005)
10 C.F.R. 72.30(c)(3)
only as an external sinking fund increases can the value of the attending surety method decrease; LBP-05-22, 62 NRC 365 (2005)
10 C.F.R. 72.30(d)
information that must be included in a decommissioning plan for an ISFSI is described; LBP-05-22, 62 NRC 346-48 (2005)
10 C.F.R. 72.54(*l*)(2)
licensees engaged in radiological decommissioning are required to conduct a decommissioning site survey; LBP-05-22, 62 NRC 348 (2005)
10 C.F.R. 72.70(a)
applicant commitments made during the licensing process usually are included within the final safety analysis report submitted 90 days after the license is approved; LBP-05-22, 62 NRC 355 (2005)
10 C.F.R. 73.21(c)
public release of information concerning physical security of nuclear facilities, known as safeguards information, which could be used by an adversary, would be contrary to the NRC's efforts to ensure protection of the nation's nuclear infrastructure and to NRC's statutory duties; DD-05-4, 62 NRC 787 (2005)
10 C.F.R. 95.35
public release of national security information is prohibited; DD-05-4, 62 NRC 787 (2005)
10 C.F.R. Part 100
a credible accident scenario requires an additional analysis of the design of the facility to show that it would not result in a radiation exposure that exceeds the exposure limits; CLI-05-19, 62 NRC 426, 428 (2005)
10 C.F.R. Part 100, Appendix A
petitioner alleges that applicant has failed to provide adequate analysis to demonstrate that the alternate cooling system, under uprate conditions, will be able to withstand the effects of an earthquake and other natural phenomena without losing its safety capabilities; LBP-05-32, 62 NRC 823 (2005)
10 C.F.R. Part 1004
NRC has no jurisdiction to enforce DOE's FOIA regulations; LBP-05-27, 62 NRC 520 n.181 (2005)
36 C.F.R. Part 800
discovery of artifacts during construction or mining operations requires cessation of any work so that the artifacts can be inventoried and evaluated; LBP-05-26, 62 NRC 470 (2005)
36 C.F.R. 800.1(c)
NRC is required to complete the National Historic Preservation Act process of consideration and consultation prior to the issuance of any license; LBP-05-28, 62 NRC 627 (2005)
36 C.F.R. 800.1(c)(1)(i)
in performing NHPA review, an agency may use the services of applicants, consultants, or designees; LBP-05-26, 62 NRC 468 n.19 (2005)
36 C.F.R. 800.1(c)(1)(ii)
the State Historic Preservation Officer coordinates State participation in the implementation of NHPA and is a key participant in the section 106 process; LBP-05-26, 62 NRC 449 n.3 (2005)
36 C.F.R. 800.1(c)(2)(iii)
agency officials should be sensitive to the special concerns of Indian tribes in historic preservation issues; LBP-05-26, 62 NRC 464 n.16 (2005)
an Indian tribe may participate in the NEPA process in lieu of the State Historic Preservation Officer with respect to undertakings affecting its lands; LBP-05-26, 62 NRC 449 n.3 (2005)
36 C.F.R. 800.3(b)
procedures may be implemented by an Agency official in a flexible manner reflecting differing program requirements, as long as the purposes of the National Historic Preservation Act are served; LBP-05-26, 62 NRC 449 (2005)

36 C.F.R. 800.3(c)
phased compliance with the National Historic Preservation Act that is consistent with the schedule for the undertaking is allowed; LBP-05-26, 62 NRC 449, 456 (2005)
36 C.F.R. 800.4
an agency is required to consult with the State Historic Preservation Officer to identify historic properties within the licensed area; LBP-05-26, 62 NRC 449 (2005)
36 C.F.R. 800.4(b)(2)
where alternatives under consideration consist of corridors or large land areas, or where access to properties is restricted, the agency official may use a phased process to conduct identification and evaluation efforts; LBP-05-26, 62 NRC 458 (2005)
36 C.F.R. 800.4(d), 800.5(d)
if an agency determines either that there are no historic properties within the licensed area or that such properties will not be affected by licensed activities, and if there is no timely objection to that determination, the license may be issued; LBP-05-26, 62 NRC 449 (2005)
36 C.F.R. 800.5
an agency is required to consult with the State Historic Preservation Officer to assess the potential adverse effects on historic properties of granting a license; LBP-05-26, 62 NRC 449 (2005)
36 C.F.R. 800.14(a)
the ''hard look'' required by NEPA is not to be equated with completion of the NHPA review; LBP-05-26, 62 NRC 472 (2005)
36 C.F.R. 800.16(y)
activities potentially covered by the National Historic Preservation Act include undertakings carried out by, or on behalf of, a federal agency and those activities requiring a federal license; LBP-05-28, 62 NRC 627 (2005)
40 C.F.R. 144.3
EPA has authorized the State of New Mexico to implement the Underground Injection Control Program on non-Native American lands in New Mexico, and the EPA implements the UIC Program on Native American lands; LBP-05-17, 62 NRC 90 n.5 (2005)
40 C.F.R. 144.6
an organization must obtain an underground injection control permit from the EPA or its authorized designee before engaging in ISL uranium mining; LBP-05-17, 62 NRC 90 n.5 (2005)
40 C.F.R. 144.7
the Underground Injection Control Program prohibits ISL uranium mining in aquifers that meet the definition of an ''underground source of drinking water,'' absent an aquifer exemption; LBP-05-17, 62 NRC 90 n.5 (2005)
40 C.F.R. 146.4
a valid aquifer exemption, once obtained, would exempt applicant from adhering to EPA's prescribed MCLs for underground sources of drinking water, because exempted aquifers, by definition, will not likely be used as a future drinking source after ISL operations are complete; LBP-05-17, 62 NRC 90 (2005)
40 C.F.R. 1502.14(d)
an applicant for a license renewal is required to prepare an environmental report that must discuss the environmental impacts of its proposed action and compare these impacts to alternatives, including the no-action alternative; LBP-05-31, 62 NRC 753 (2005)
the range of NEPA alternatives to an operating license renewal that NRC must consider involve only those for providing baseload generating capacity and the ''no-action'' alternative; LBP-05-31, 62 NRC 753 (2005)
40 C.F.R. 1502.16(g)
an agency's assessment of environmental impacts requires an assessment of historic and cultural resources; LBP-05-26, 62 NRC 450 (2005)
40 C.F.R. 1502.21
environmental impact statements typically incorporate by reference other analyses and data by citing to the material and describing its content; CLI-05-28, 62 NRC 730 (2005)
material incorporated by reference must be reasonably available for inspection by interested persons within the time allowed for comment; CLI-05-28, 62 NRC 730 (2005)

LEGAL CITATIONS INDEX
STATUTES

44 U.S.C. §§ 1507, 1508
publication in the *Federal Register* is legally sufficient notice to all interested or affected persons regardless of actual knowledge or hardship resulting from ignorance, except those who are legally entitled to personal notice; CLI-05-24, 62 NRC 565 n.60 (2005)

Administrative Procedure Act, 5 U.S.C. § 551(4)
''rule'' is defined as an agency statement of future effect; LBP-05-26, 62 NRC 460 (2005)

Administrative Procedure Act, 5 U.S.C. § 552(a)(4)(B)
NRC has no jurisdiction to enforce DOE's FOIA regulations; LBP-05-27, 62 NRC 520 n.181 (2005)

Administrative Procedure Act, 5 U.S.C. § 553
Commission regulations cannot be altered absent a notice-and-comment rulemaking; CLI-05-16, 62 NRC 46 (2005)

Atomic Energy Act, 42 U.S.C. 2014(e)(2)
section 11(e)(2) byproduct waste is the waste produced by the extraction or concentration of uranium from any ore processed primarily for its source material content; LBP-05-17, 62 NRC 111 (2005)

Atomic Energy Act, 42 U.S.C. § 2099
the Commission shall not issue a license that would be inimical to the health and safety of the public; LBP-05-17, 62 NRC 89 (2005)

Atomic Energy Act, 147, 42 U.S.C. § 2166
public release of information concerning physical security of nuclear facilities, known as safeguards information, which could potentially be exploited by an adversary, would be contrary to the NRC's efforts to ensure protection of the nation's nuclear infrastructure and to NRC's statutory duties; DD-05-4, 62 NRC 787 (2005)

Atomic Energy Act, 147, 42 U.S.C. § 2167
NRC has authority to protect safeguards information from unauthorized disclosure, and there is no balancing of the government's duty to protect safeguards information against the public interest in disclosure; CLI-05-22, 62 NRC 544 (2005)

Atomic Energy Act, 186
for a licensee statement to be treated as a false or inaccurate statement subject to NRC enforcement, the statement must be made to NRC, and it must be material to NRC; DD-05-8, 62 NRC 878 (2005)

Atomic Energy Act, 189a, 42 U.S.C. § 2239(a)
the mandatory hearing requirement provides that the Commission shall hold a hearing on each application under section 103 or 104b for a construction permit for a utilization or production facility; CLI-05-16, 62 NRC 27 (2005)

Atomic Energy Act, 189a(1)(A), 42 U.S.C. § 2239a(1)(A)
the Commission must offer an opportunity for a hearing involving transfers of control over licensed facilities; CLI-05-25, 62 NRC 573 (2005)

Atomic Energy Act, 193(b)(1), 42 U.S.C. § 2243(b)(1)
the Commission shall conduct a single adjudicatory hearing with regard to the licensing of construction and operation of a uranium enrichment facility under sections 53 and 63; CLI-05-16, 62 NRC 27 (2005)

Energy Policy Act of 1992, § 801, codified at 42 U.S.C. § 10141 note
EPA radiation-exposure standard for Yucca Mountain violates this statute because the regulatory 10,000-year compliance period was not based upon and consistent with the findings and recommendations of the National Academy of Sciences; LBP-05-27, 62 NRC 494 (2005)

LEGAL CITATIONS INDEX

STATUTES

Executive Order 12958
NRC's assessments of boiling water reactor structural vulnerabilities, including both the methodology employed and the results, are classified as national security information; DD-05-4, 62 NRC 787 (2005)
Freedom of Information Act, 5 U.S.C. § 552(b)(5)
the deliberative process privilege available in NRC proceedings is closely related to Exemption 5; LBP-05-33, 62 NRC 843 (2005)
National Environmental Policy Act, 42 U.S.C. § 4331(b)(2)(4)
the purpose of 10 C.F.R. 51.45(b) is to identify resources for the NRC Staff, including cultural and historic resources, that could reasonably be expected to be adversely affected, so the NRC can meet its obligations under; LBP-05-28, 62 NRC 623 (2005)
National Environmental Policy Act, 42 U.S.C. § 4331(b)(4)
an agency satisfies its obligation under NEPA to take a ''hard look'' at the impacts a project will have on cultural resources when it engages in informed and reasoned decisionmaking that is guided by the objective of preserving important historic and cultural aspects of our national heritage; LBP-05-26, 62 NRC 472 (2005)
National Environmental Policy Act, 102, 42 U.S.C. § 4332(2)(A), (C), and (E)
whether or not an application is contested, NRC regulations give a licensing board special responsibility for three baseline NEPA issues; CLI-05-16, 62 NRC 30 n.24 (2005)
National Environmental Policy Act, 42 U.S.C. § 4332(2)(C)
the Staff is required to consider the potential environmental effects of any proposed major federal action significantly affecting the quality of the human environment; LBP-05-19, 62 NRC 154 (2005)
to demonstrate compliance with this standard, an agency generally prepares a detailed statement, an environmental impact statement, which establishes that the agency has made a reasonable and good faith effort to consider the values NEPA seeks to protect; LBP-05-26, 62 NRC 449 (2005)
National Environmental Policy Act, 42 U.S.C. § 4332(2)(C)
Staff bears the obligation to prepare a full environmental impact statement for any major federal action, including the grant or denial of a Part 70 license; LBP-05-28, 62 NRC 611 (2005)
National Environmental Policy Act, §§ 102(2)(C)(iii), 102(2)(E), 42 U.S.C. §§ 4332(2)(C)(iii), 4332(2)(E)
NRC is required to consider alternatives before deciding whether to take major federal actions significantly affecting the environment, but, the ''reasonable alternatives'' issue does not apply with full force to early site permit or ''partial'' construction permit cases; CLI-05-16, 62 NRC 48 (2005)
National Environmental Policy Act, § 102(2)(E)
applicant's discussion of alternatives must be sufficiently complete to aid the Commission in developing and exploring appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources; LBP-05-31, 62 NRC 753 (2005)
National Historic Preservation Act, 16 U.S.C. § 470a(a)(1)(A)
the National Register of Historic Places is a registry for sites, structures, and objects that have historic significance; LBP-05-26, 62 NRC 448 (2005)
National Historic Preservation Act, 16 U.S.C. § 470(b)(4)
preserving the Nation's historical heritage is in the public interest; LBP-05-26, 62 NRC 448 (2005)
National Historic Preservation Act, 106, 16 U.S.C. § 470f
a federal agency must consider the impact that its granting of a license will have on property that is listed in, or eligible for being listed in, the National Register of Historic Places; LBP-05-26, 62 NRC 448 (2005); LBP-05-28, 62 NRC 627 (2005)
NRC is required to complete the NHPA process of consideration and consultation prior to the issuance of any license; LBP-05-28, 62 NRC 627 n.159 (2005)
the purpose of 10 C.F.R. 51.45(b) is to identify resources for the NRC Staff, including cultural and historic resources, that could reasonably be expected to be adversely affected, so the NRC can meet its obligations under; LBP-05-28, 62 NRC 623 (2005)
Nuclear Waste Policy Act of 1982, Pub. L. No. 97-425, Title I, §§ 112-114 (codified as amended at 42 U.S.C. §§ 10132-10134 (2000)
DOE was charged with preparing and submitting an application to NRC for a license to construct a high-level waste geologic repository; LBP-05-27, 62 NRC 487 (2005)

LEGAL CITATIONS INDEX

STATUTES

Nuclear Waste Policy Act of 1982, 42 U.S.C. §§ 10262-10263 (2000)
the Nuclear Waste Technical Review Board is tasked with reviewing the progress of the Yucca Mountain project; LBP-05-27, 62 NRC 488 n.29 (2005)

Price-Anderson Act, 7, Pub. L. No. 85-256, § 7, 71 Stat. 576, 579 (Sept. 2, 1957)
the original version of the statutory ''mandatory hearing'' requirement was applicable to all Atomic Energy Commission licensing applications; CLI-05-16, 62 NRC 27 (2005)

Pub. L. No. 87-615, § 2, 76 Stat. 409 (1962), *amending* 42 U.S.C. § 2239(a)
Congress amended section 189a to confine the mandatory hearing requirement to construction permit applications only; CLI-05-16, 62 NRC 28 (2005)

Pub. L. No. 101-575, § 5(e), 104 Stat. 2835 (Nov. 15, 1990), *amending* AEA § 193, 42 U.S.C. § 2243(b)(1)
Congress amended section 189a to confine the mandatory hearing requirement to construction permit applications only; CLI-05-16, 62 NRC 28 (2005)

Safe Drinking Water Act, 42 U.S.C. § 300f
an organization must obtain an underground injection control permit from the EPA or its authorized designee before engaging in ISL uranium mining; LBP-05-17, 62 NRC 90 n.5 (2005)

USEC Privatization Act, 3113
DOE is obliged to accept depleted uranium for disposal if NRC has made a determination that depleted uranium is a low-level radioactive waste; CLI-05-20, 62 NRC 526 (2005)
in estimating costs of depleted uranium disposal, DOE has acted pursuant to its statutory authority; LBP-05-21, 62 NRC 540 (2005)

LEGAL CITATIONS INDEX
OTHERS

William H. Berman and Lee M. Hydeman, ''The Atomic Energy Commission and Regulating Nuclear Facilities'' (Ann Arbor, MI, April 1961), *extracts republished in* Staff of the Joint Committee, Improving the AEC Regulatory Process, Vol. II, Appendix 6, at 431 (Joint Comm. Print 1961)
contraction of the mandatory hearing requirement to construction permit applications only resulted from Congress's belief that separate hearings at both the construction permit and operating license stages constituted ''overjudicialization'' of the licensing process; CLI-05-16, 62 NRC 28 (2005)

William H. Berman and Lee M. Hydeman, ''The Atomic Energy Commission and Regulating Nuclear Facilities'' (Ann Arbor, MI, April 1961), *extracts republished in* Staff of the Joint Committee, Improving the AEC Regulatory Process, Vol. II, Appendix 6, at 447 (Joint Comm. Print 1961)
in 1957, the AEC was issuing construction permits without prior notice to the public and generally without a public hearing and was basing its construction permit decisions on reactor safety evaluations that were likewise unavailable to the public; CLI-05-16, 62 NRC 27 (2005)

William H. Berman and Lee M. Hydeman, ''The Atomic Energy Commission and Regulating Nuclear Facilities'' (Ann Arbor, MI, April 1961) *extracts republished in* Staff of the Joint Committee, Improving the AEC Regulatory Process, Vol. II, Appendix 6, at 448 & n.43 (Joint Comm. Print 1961)
the original version of the statutory ''mandatory hearing'' requirement in section 7 of the Price-Anderson Act was applicable to all Atomic Energy Commission licensing applications; CLI-05-16, 62 NRC 27 (2005)

David F. Cavers, *Administrative Decisionmaking in Nuclear Facilities Licensing,* 110 U. Pa. L. Rev. 330, 348 (1962)
a ''truly independent review'' at mandatory hearings means that licensing boards are not to ''rubber stamp'' the findings of the NRC Staff; CLI-05-16, 62 NRC 40 (2005)

David F. Cavers, *Administrative Decisionmaking in Nuclear Facilities Licensing,* 110 U. Pa. L. Rev. 330, 359-60 (1962)
the hearing examiner's (licensing board's) important but limited role is described; CLI-05-16, 62 NRC 41 (2005)

108 Cong. Rec. 14,727 (Aug. 7, 1962) (Sen. Pastore)
Congress's decision to eliminate the mandatory hearing requirement for operating license applications was based in part on the conclusion that there would still be a mandatory hearing at the critical point in reactor licensing (the construction permit stage) where the suitability of the site is to be judged; CLI-05-16, 62 NRC 28 n.15 (2005)

Kenneth Culp Davis, *Nuclear Facilities Licensing: Another View,* 110 U. Pa. L. Rev. 371, 380 (1962)
the word ''hearing'' can refer to any of a number of events; CLI-05-16, 62 NRC 42 (2005)

Fed. R. Evid. 509, 56 F.R.D. 183, 251-52 (1972) (rejected by Congress in 1973)
assertion of the deliberative process privilege, as a privilege for official information, is allowed as low as the level of any attorney representing the government; LBP-05-33, 62 NRC 844 n.28 (2005)

Fed. R. Evid. 702
a witness is qualified as an expert by knowledge, skill, experience, training, or education; LBP-05-21, 62 NRC 295-96 (2005); LBP-05-22, 62 NRC 357 (2005)

Fed. R. Civ. P. 26
NRC mandatory disclosure provisions for Subpart L proceedings are generally modeled on this rule, but have been tailored to reflect the nature and requirements of NRC proceedings; LBP-05-33, 62 NRC 841 n.24 (2005)

LEGAL CITATIONS INDEX

OTHERS

Fed. R. Civ. P. 56
summary disposition motions under Part 2 rules are held to the same standards by which the federal courts evaluate summary judgment motions; LBP-05-19, 62 NRC 180 (2005)

H.R. Rep. No. 85-435, at 25 (1957) (to accompany H.R. 7383)
the Atomic Energy Acts of 1946 and 1954 contained no requirement for hearing on all applications, but merely on those applications for which a hearing is requested by any interested party; CLI-05-16, 62 NRC 27 (2005)

H.R. Rep. No. 85-435, at 29-30 (1957)
the original version of the statutory ''mandatory hearing'' requirement in section 7 of the Price-Anderson Act was applicable to all Atomic Energy Commission licensing applications; CLI-05-16, 62 NRC 27 (2005)

H.R. Rep. No. 1966, at 8 (Joint Committee on Atomic Energy, 87th Cong. 2d Sess., July 5, 1962) (to accompany H.R. 12,336)
Congress's decision to eliminate the mandatory hearing requirement for operating license applications was based in part on the conclusion that there would still be a mandatory hearing at the critical point in reactor licensing (the construction permit stage) where the suitability of the site is to be judged; CLI-05-16, 62 NRC 28 n.15 (2005)

John M. Kelley, *Audi Alteram Partem,* 9 Natural Law Forum 103 (1964)
intervenors and other parties have the fundamental right of fair treatment; LBP-05-29, 62 NRC 698 (2005)

Radiation Safety and Regulation: Hearings Before the Joint Comm. on Atomic Energy, 87th Cong. 313 (1961) (AEC Commissioner Loren K. Olson)
the hearing examiner's (licensing board's) important but limited role is described; CLI-05-16, 62 NRC 41 (2005)

Radiation Safety and Regulation: Hearings Before the Joint Comm. on Atomic Energy, 87th Cong. 340 (former ACRS Chairman Theos J. Thompson), 343 (former ACRS Chairman Leslie Silverman) (1961)
truly independent review by licensing boards, in the interest of public safety, does not mean that multiple reviews of the same uncontested issues, first by the NRC Staff, then by the ACRS, and finally by a licensing board, would be necessary to serve this purpose; CLI-05-16, 62 NRC 40 (2005)

Radiation Safety and Regulation: Hearings Before the Joint Comm. on Atomic Energy, 87th Cong. 369 (1961) (testimony of former AEC General Counsel William Mitchell)
the boards' role is to decide whether the Staff's safety findings, on which so much depends, were the right ones; CLI-05-16, 62 NRC 40 (2005)

Radiation Safety and Regulation: Hearings Before the Joint Comm. on Atomic Energy, 87th Cong. 373 (1961) (Prof. Kenneth Culp Davis)
contraction of the mandatory hearing requirement to construction permit applications only resulted from Congress's belief that separate hearings at both the construction permit and operating license stages constituted ''overjudicialization'' of the licensing process; CLI-05-16, 62 NRC 28 (2005)

Radiation Safety and Regulation: Hearings Before the Joint Comm. on Atomic Energy, 87th Cong. 376 (1961) (Mr. Lee Hydeman)
the boards' role is to constitute a check on the understanding of the Staff; CLI-05-16, 62 NRC 40 (2005)

S. Rep. No. 85-296 (1957), *reprinted in* 1957 U.S.C.C.A.N. 1803, 1826, *available at* 1957 WL 5103, Leg. Hist.
the Atomic Energy Acts of 1946 and 1954 contained no requirement for hearing on all applications, but merely on those applications for which a hearing is requested by any interested party; CLI-05-16, 62 NRC 27 (2005)

S. Rep. No. 1677, 87th Cong. 7-8, *reprinted in* 1962 U.S.C.C.A.N. 2207, 2214 (Joint Committee)
Congress's decision to eliminate the mandatory hearing requirement for operating license applications was based in part on the conclusion that there would still be a mandatory hearing at the critical point in reactor licensing (the construction permit stage) where the suitability of the site is to be judged; CLI-05-16, 62 NRC 28 n.15 (2005)

Staff of the Joint Committee on Atomic Energy, A Study of AEC Procedures and Organization in the Licensing of Reactor Facilities at 9 (Joint Comm. Print 1957)
prior to April 1957, the AEC was basing its construction permit decisions on reactor safety evaluations that were unavailable to the public; CLI-05-16, 62 NRC 27 (2005)

LEGAL CITATIONS INDEX

OTHERS

Staff of the Joint Committee on Atomic Energy, A Study of AEC Procedures and Organization in the Licensing of Reactor Facilities at 8, 73 (Joint Comm. Print 1957)

the mandatory hearing requirement was intended to address open-government and public-confidence issues associated with the Commission's treatment of applications for power reactor construction permits; CLI-05-16, 62 NRC 28 (2005)

Staff of the Joint Committee on Atomic Energy, A Study of AEC Procedures and Organization in the Licensing of Reactor Facilities at 19 & n.10, 128-31 (Joint Comm. Print 1957)

prior to April 1957, the AEC had granted only one request for hearing; CLI-05-16, 62 NRC 27 (2005)

Views and Comments on Improving the AEC Regulatory Process: *Hearings Before the Joint Comm. on Atomic Energy,* 87th Cong. 12 (1961)

contraction of the mandatory hearing requirement to construction permit applications only resulted from Congress's belief that separate hearings at both the construction permit and operating license stages constituted ''overjudicialization'' of the licensing process; CLI-05-16, 62 NRC 28 (2005)

Webster's Third New International Dictionary 472 (1993)

''concurrence'' is defined as ''agreement or union in action'' and ''agreement in opinion,'' and ''concur'' as meaning ''approve'' or ''agree''; LBP-05-27, 62 NRC 508 (2005)

Webster's Third New International Dictionary 1372, 2296 (1993)

''manager'' is defined as ''one that manages'' and ''supervisor'' as ''one that supervises a person, group, department, organization, or operation''; LBP-05-27, 62 NRC 505 (2005)

8 Charles Alan Wright et al., *Federal Practice & Procedure* § 2024 (2d ed. 1994)

a document is prepared in anticipation of litigation if, in light of the nature of the document and the factual situation in the particular case, the document can fairly be said to have been prepared or obtained because of the prospect of litigation; LBP-05-27, 62 NRC 520 (2005)

13A Charles A. Wright, Arthur R. Miller, & Edward H. Cooper, *Federal Practice and Procedure* § 3536, at 535 (2d ed. 1984)

''jurisdiction to determine jurisdiction'' refers to the power of a court to determine whether it has jurisdiction over the parties to and the subject matter of a suit; LBP-05-16, 62 NRC 71 n.13 (2004)

26A Charles Alan Wright & Kenneth W. Graham, Jr., *Federal Practice and Procedure* § 5693 (1992)

justification for requiring the agency head to claim deliberative process privilege is that it will discourage the making of frivolous claims for purely tactical reasons; LBP-05-33, 62 NRC 844 (2005)

SUBJECT INDEX

ACCIDENTS
if the probability of a radiation release from an accidental crash of an F-16 jet is less than one in a million per year, such crashes are not credible and thus need not be considered in designing the facility; LBP-05-29, 62 NRC 635 (2005)
in risk analysis, if the consequences of an accident are shown to be insignificant, no attention needs to be paid to the actual probability of that accident; LBP-05-29, 62 NRC 635 (2005)
ACCIDENTS, LOSS-OF-COOLANT
the potential for large loose parts to become a factor is discussed; DD-05-5, 62 NRC 791 (2005)
ADJUDICATORY HEARINGS
absent a showing that the board's fact-specific rulings were clearly erroneous, the Commission generally defers to the board on matters of factual findings; CLI-05-16, 62 NRC 1 (2005)
ADMINISTRATIVE PROCEDURE ACT
revised rules of practice must comply with; CLI-05-23, 62 NRC 546 (2005)
AIRCRAFT CRASHES
the integrity of a spent fuel storage canister as a radiation boundary following an accidental aircraft crash impact is considered in an independent spent fuel storage installation licensing proceeding; LBP-05-29, 62 NRC 635 (2005)
the scope of a licensing hearing involves only the threat posed by accidental crashes, not deliberate ones; LBP-05-29, 62 NRC 635 (2005)
there was no clear error of fact or other basis for Commission review of a board's decision to use experimental data to calculate how the stainless steel multipurpose storage canister would hold up in an aircraft crash, or its rejection of a DOE Standard formulated for dissimilar situations; CLI-05-19, 62 NRC 403 (2005)
AMENDMENT OF CONTENTIONS
a motion for leave to file a new contention, filed within the 20-day time period previously set by the board, satisfies the requirement that such motions be filed in a timely fashion; LBP-05-32, 62 NRC 813 (2005)
contentions based on applicant's environmental report may be amended or new contentions may be filed if there are data or conclusions in the NRC draft or final environmental impact statement that differ significantly from the data or conclusions in the applicant's documents; CLI-05-20, 62 NRC 523 (2005)
APPEALS
intervenors cannot seek to cure deficiencies of earlier pleadings by later introducing wholly new issues that could have been raised previously; CLI-05-20, 62 NRC 523 (2005)
where there is no irreparable harm, the Commission is reluctant to rush to judgment on the merits of an appeal before it has the opportunity to examine the board's ruling and the parties' arguments in detail; CLI-05-27, 62 NRC 715 (2005)
APPELLATE REVIEW
absent a showing that the board's fact-specific rulings were clearly erroneous, the Commission generally defers to the board on matters of factual findings; CLI-05-16, 62 NRC 1 (2005)
on highly technical, fact-intensive questions, where the affidavits or submissions of experts must be weighed, the Commission is generally disinclined to upset the findings and conclusions of a presiding officer; CLI-05-28, 62 NRC 721 (2005)
the Commission rejects arguments that are filed, without justification, for the first time on appeal; CLI-05-16, 62 NRC 1 (2005)

to obtain discretionary Commission review, petitioner must show ''a substantial question'' on the types of issues that may merit Commission review; CLI-05-16, 62 NRC 1 (2005)
APPLICANTS
the requirement to identify cultural and historic resources is imposed by 10 C.F.R. § 51.45(b), not by the National Historic Preservation Act; LBP-05-28, 62 NRC 585 (2005)
where a federal agency is not the sponsor of the project, the federal government's consideration of alternatives may accord substantial weight to the preferences of; LBP-05-19, 62 NRC 134 (2005)
ATOMIC ENERGY ACT
an intervenor may not legitimately claim that a licensee's ability to make post-hearing determinations deprives the intervenor of its hearing rights by merely conjecturing that the licensee might violate prescribed procedures; LBP-05-17, 62 NRC 77 (2005)
applying a less stringent ''sufficiency'' standard when examining uncontested issues merely recognizes the inherent limitations on a board's review of a matter not in contest and therefore not subject to the more intense scrutiny afforded by the adversarial process; CLI-05-17, 62 NRC 5 (2005)
boards should conduct a simple ''sufficiency'' review of uncontested AEA and NEPA issues, not a *de novo* review; CLI-05-17, 62 NRC 5 (2005)
Congress did not mean to require a hearing where a hearing serves no purpose; LBP-05-17, 62 NRC 77 (2005)
contested and uncontested designations apply issue-by-issue, and not to proceedings-at-large; CLI-05-17, 62 NRC 5 (2005)
deliberate terrorist-type attacks are not appropriate issues to be considered in licensing hearings; LBP-05-29, 62 NRC 635 (2005)
determinations that licensing boards must make in uncontested proceedings are described; CLI-05-17, 62 NRC 5 (2005)
in testing the adequacy of Staff's review, boards may ask clarifying questions of witnesses, order the record to be supplemented, reject the proposed action, or even deny the construction permit outright, and set conditions on the approval of the construction permit; CLI-05-17, 62 NRC 5 (2005)
issues that licensing boards must consider in hearings on contested applications are described; CLI-05-17, 62 NRC 5 (2005)
licensing boards conducting mandatory hearings on uncontested issues must take an independent ''hard look'' at NRC Staff safety and environmental findings, but must not replicate NRC Staff work; CLI-05-17, 62 NRC 5 (2005)
licensing boards have considerable flexibility regarding the actual procedure to be followed at mandatory hearings; CLI-05-17, 62 NRC 5 (2005)
licensing boards must expeditiously decide legal and policy issues without sacrificing fairness; CLI-05-17, 62 NRC 5 (2005)
no ''license transfer proceeding'' exists for which the Commission can publish a notice of opportunity for hearing or in which a petitioner can seek intervention and a hearing if a proposed merger leaves control of the licensee unchanged; CLI-05-25, 62 NRC 572 (2005)
NRC has authority to protect safeguards information from unauthorized disclosure, and there is no balancing of the government's duty to protect safeguards information against the public interest in disclosure; CLI-05-22, 62 NRC 542 (2005)
NRC regulations expressly prohibit *de novo* board review of uncontested AEA issues, but do not apply the bar to NEPA issues; CLI-05-17, 62 NRC 5 (2005)
the Commission shall hold a hearing on each application for a construction permit for a utilization or production facility; CLI-05-17, 62 NRC 5 (2005)
the requirement that the Commission shall conduct a single adjudicatory hearing with regard to the licensing of construction and operation of a uranium enrichment facility resulted from Congress's belief that separate hearings at both the construction permit and operating license stages constituted overjudicialization of the licensing process; CLI-05-17, 62 NRC 5 (2005)
the words ''determine'' and ''consider'' are used synonymously; CLI-05-17, 62 NRC 5 (2005)
use of a deferential review standard for uncontested issues supports the NRC policies of promptness and efficiency; CLI-05-17, 62 NRC 5 (2005)
verification by the NRC Staff that a licensee complies with preapproved design or testing criteria is a highly technical inquiry not particularly suitable for hearing; LBP-05-17, 62 NRC 77 (2005)

SUBJECT INDEX

BURDEN OF PERSUASION
in seeking to pose an admissible challenge to the ER or EIS discussion of alternatives, the burden is on intervenors to propose reasonable alternatives by which the project's ends could be achieved; LBP-05-19, 62 NRC 134 (2005)
when a witness's qualifications are challenged, the sponsoring party has the burden of demonstrating the witness's expertise; LBP-05-21, 62 NRC 248 (2005); LBP-05-22, 62 NRC 328 (2005)
BURDEN OF PROOF
to prevail on each factual issue, the applicant's position must be supported by a preponderance of the evidence; LBP-05-21, 62 NRC 248 (2005)
CASE OR CONTROVERSY
a justiciable controversy must involve adverse parties representing a true clash of interests; LBP-05-17, 62 NRC 77 (2005)
absent compelling reasons, the Commission adheres to this doctrine in its adjudicatory proceedings; LBP-05-17, 62 NRC 77 (2005)
questions raised must be presented in an adversary context and in a form historically viewed as capable of resolution through the judicial process; LBP-05-17, 62 NRC 77 (2005)
when, during the course of a proceeding, the parties no longer disagree about the appropriateness of a requested remedy, a licensing board should ordinarily refrain from adjudicating questions underlying whether that remedy should be granted; LBP-05-17, 62 NRC 77 (2005)
CERTIFICATION
licensing boards are encouraged to certify or refer novel legal or policy matters, but that does not mean that all complicated questions, whatever their nature, must be resolved by the Commission prior to final board decisions; CLI-05-21, 62 NRC 538 (2005)
motions to compel must be accompanied by a certification that the moving party has made a sincere effort to contact the other parties and resolve the issues; LBP-05-33, 62 NRC 828 (2005)
CERTIFIED QUESTIONS
it is appropriate for the Commission to consider whether an exemption should be granted to consider emergency planning concerns of an adjacent county in another state to be addressed in a license renewal; LBP-05-16, 62 NRC 56 (2005)
the Commission accepts certification of a question relating to an exemption from a regulation; CLI-05-18, 62 NRC 185 (2005)
CIVIL PENALTIES
licensee's failure to provide complete and accurate information in its license renewal application is deemed a minor violation and not subject to a civil penalty; DD-05-6, 62 NRC 862 (2005)
COMMISSIONERS, AUTHORITY
customary practice is to accept board-certified questions; CLI-05-18, 62 NRC 185 (2005)
CONSIDERATION OF ALTERNATIVES
a reviewing agency should take into account the applicant's goals for the project; CLI-05-29, 62 NRC 801 (2005)
although the Staff may rely on the environmental report in preparation of its environmental impact statement, it must also independently evaluate and be responsible for the reliability of all information used in the draft EIS; LBP-05-19, 62 NRC 134 (2005)
applicant is only required to consider feasible, nonspeculative alternatives, and the range of alternatives need not extend beyond those reasonably related to the purposes or goals of the proposed project; LBP-05-31, 62 NRC 735 (2005)
at the ESP stage of the construction permit process, the boards' ''reasonable alternatives'' responsibilities are limited because the proceeding is focused on an appropriate site, not the actual construction of a reactor; CLI-05-17, 62 NRC 5 (2005)
energy efficiency would be a possible alternative to a project only if the project's purpose was to meet future energy needs in the area; CLI-05-29, 62 NRC 801 (2005)
federal agencies take a ''hard look'' at the environmental impacts of a proposed major federal action, and at alternatives to that action; LBP-05-19, 62 NRC 134 (2005)
in its environmental report, applicant is required to provide a discussion of alternatives to the proposed action that is sufficiently complete to aid the Commission in developing and exploring appropriate alternatives to the recommended course of action; LBP-05-31, 62 NRC 735 (2005)

in seeking to pose an admissible challenge to the ER or EIS discussion regarding alternatives, the burden is upon intervenors to propose reasonable alternatives by which the project's ends could be achieved; LBP-05-19, 62 NRC 134 (2005)
NEPA does not require a detailed study of rejected alternatives, but only a brief discussion of why an option was eliminated from further consideration; CLI-05-28, 62 NRC 721 (2005)
NEPA does not require a separate analysis of alternatives that would have substantially similar consequences; CLI-05-28, 62 NRC 721 (2005)
NEPA does not require agencies to analyze impacts of alternatives that are speculate, remote, impractical, or not viable; CLI-05-28, 62 NRC 721 (2005)
only alternatives reasonably related to the goals of the proposed action as well as the no-action alternative need to be considered in applicant's environmental report; LBP-05-19, 62 NRC 134 (2005); LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)
when the purpose is to accomplish one thing, it makes no sense to consider the alternative ways by which another thing might be achieved; CLI-05-29, 62 NRC 801 (2005)
where applicant has no business connection to the end users of its electricity and therefore no ability to implement demand-side management, demand-side management is not a reasonable alternative, and NEPA itself, therefore, does not require its examination; LBP-05-19, 62 NRC 134 (2005)
CONSTRUCTION OF TERMS
''concurrence process'' is construed as a process whereby management reviews a document for substantive agreement or disagreement; LBP-05-27, 62 NRC 478 (2005)
for the purposes of meeting the section 2.1001 definition of ''circulated draft,'' the term ''concurrence'' should be given its plain meaning of ''agreement'' or ''approval''; LBP-05-27, 62 NRC 478 (2005)
the words ''determine'' and ''consider'' are used synonymously; CLI-05-17, 62 NRC 5 (2005)
when a regulatory term is undefined in the regulations, its definition may be gleaned from its plain meaning, the structure of the regulation, and then, if appropriate, the regulatory history; LBP-05-27, 62 NRC 478 (2005)
within the meaning of the section 2.1001 definition of ''circulated draft,'' the word ''nonconcurrence'' means a comment or objection indicating significant, substantive nonagreement with the draft in question; LBP-05-27, 62 NRC 478 (2005)
CONTENTIONS
a contention of omission becomes moot when the omission is cured; LBP-05-24, 62 NRC 429 (2005)
deliberate terrorist-type attacks are not appropriate issues to be considered in licensing hearings; LBP-05-29, 62 NRC 635 (2005)
in addition to establishing standing, an intervention petitioner must also set forth at least one admissible contention; LBP-05-31, 62 NRC 735 (2005)
intervenors may not freely change the focus of admitted contentions at will as litigation progresses, but are bound by the terms of the contentions; CLI-05-20, 62 NRC 523 (2005)
petitioner must present the factual information and expert opinions necessary to adequately support its contention; LBP-05-31, 62 NRC 735 (2005)
petitioners must show that a genuine dispute exists with regard to the license application, challenge and identify either specific portions of, or alleged omissions from, the application, and provide the supporting reasons for each dispute; LBP-05-28, 62 NRC 585 (2005)
the Commission should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing; LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)
the reach of a contention necessarily hinges upon its terms coupled with its stated bases; LBP-05-19, 62 NRC 134 (2005); LBP-05-31, 62 NRC 735 (2005)
when a contention of omission is dismissed as moot, intervenor may file new or amended contentions challenging the adequacy of the documents that cured the omission in the original contention; LBP-05-24, 62 NRC 429 (2005)
whether the integrity of a spent fuel storage canister subjected to a lesser aircraft crash impact causing no radiation release will be sufficient to prevent the spent fuel bundles from sustaining any damage is not a litigable issue; LBP-05-29, 62 NRC 635 (2005)
See also Amendment of Contentions

SUBJECT INDEX

CONTENTIONS, ADMISSIBILITY

a brief explanation of the basis helps define the scope of a contention; LBP-05-31, 62 NRC 735 (2005)

a facility's compliance with its current licensing basis is not within the scope of a license amendment proceeding, but the ability of the facility, in its unchanged current physical condition, to perform satisfactorily at the requested increased power plant level, is litigable; LBP-05-32, 62 NRC 813 (2005)

a general fear that a licensee cannot be trusted to follow regulations of any kind in not a litigable issue; LBP-05-28, 62 NRC 585 (2005)

a motion for leave to file a new contention, filed within the 20-day time period previously set by the board, satisfies the requirement that such motions be filed in a timely fashion; LBP-05-32, 62 NRC 813 (2005)

a presiding officer has the discretion to dismiss a contention where a sponsoring party does not pursue it at hearing; LBP-05-22, 62 NRC 328 (2005)

an attack on applicable statutory requirements must be rejected by a Licensing board as outside the scope of its proceeding; LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)

any contention that falls outside the specified scope of the proceeding must be rejected; LBP-05-28, 62 NRC 585 (2005)

challenge to an NRC regulation in an adjudicatory proceeding not permitted; LBP-05-22, 62 NRC 328 (2005); LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)

challenges that question the NEPA analysis performed in a relicensing proceeding to develop a generic environmental impact analysis constitute an impermissible attack on agency regulations; LBP-05-31, 62 NRC 735 (2005)

contentions that offer no tangible information, no experts, no substantive affidavits, but instead only bare assertions and speculation will be dismissed; LBP-05-31, 62 NRC 735 (2005)

dismissal is appropriate for any contention that fails to directly controvert the license application, or that mistakenly asserts that it does not address a relevant issue; LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)

environmental impacts of terrorism are insufficiently related to the effects of plant aging to be material to a license renewal proceeding; LBP-05-31, 62 NRC 735 (2005)

failure to comply with any of the six pleading requirements is grounds for the dismissal of a contention; LBP-05-31, 62 NRC 735 (2005)

for a contention to be admissible, it must be material to the findings the NRC must make to support the action that is involved in the proceeding; LBP-05-19, 62 NRC 134 (2005); LBP-05-28, 62 NRC 585 (2005)

government entities seeking to litigate their own contentions are held to the same pleading rules as everyone else; CLI-05-24, 62 NRC 551 (2005)

if a new contention is timely under section 2.309(f)(2)(iii), then it appears contradictory to rule that it must also satisfy the eight factors in section 2.309(c) for nontimely filings; LBP-05-32, 62 NRC 813 (2005)

in addition to the general provisions for admissibility of nontimely contentions, there is an additional process for determining the admissibility of contentions based upon new information that is added to the record; LBP-05-19, 62 NRC 134 (2005)

in seeking to pose an admissible challenge to the ER or EIS discussion regarding alternatives, the burden is upon intervenors to propose reasonable alternatives by which the project's ends could be achieved; LBP-05-19, 62 NRC 134 (2005)

information regarding the applicant's environmental report and the Staff's environmental review documents is relevant to the good-cause factor for admission of late-filed contentions; LBP-05-19, 62 NRC 134 (2005)

intervention petitions must challenge and identify either specific portions of, or alleged omissions from, the application, and provide the supporting reasons for each dispute; LBP-05-17, 62 NRC 77 (2005); LBP-05-31, 62 NRC 735 (2005)

issues raised in contentions must be within the scope of the proceeding, which is defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-05-31, 62 NRC 735 (2005)

management integrity challenges must assert and demonstrate that the personnel alleged to have acted improperly in the past are also going to be involved with the activity that is the subject of the current proceeding; LBP-05-28, 62 NRC 585 (2005)
mere reference to previous enforcement history, without establishing a link between the prior history and the contention at issue, is insufficient support; LBP-05-28, 62 NRC 585 (2005)
petitioner may not simply refer to voluminous documents, such as those on a Web site, without providing analysis demonstrating that those documents provide factual support for a proffered contention; LBP-05-28, 62 NRC 585 (2005)
petitioner must demonstrate that the subject matter of a contention would impact the grant or denial of a pending license application; LBP-05-31, 62 NRC 735 (2005)
petitioner must present the factual information and expert opinions necessary to adequately support its contention; LBP-05-28, 62 NRC 585 (2005)
petitioner must provide some sort of minimal basis indicating the potential validity of the issue; LBP-05-31, 62 NRC 735 (2005)
petitioner must show why the alleged error or omission is of possible consequence to the result of the proceeding; LBP-05-28, 62 NRC 585 (2005)
providing any material or document as a basis for a contention without setting forth an explanation of its significance is inadequate; LBP-05-28, 62 NRC 585 (2005)
rules on contention admissibility are strict by design; LBP-05-28, 62 NRC 585 (2005)
six pleading requirements must be met; LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)
some significant link must exist between the claimed deficiency and either the health and safety of the public or of the environment; LBP-05-31, 62 NRC 735 (2005)
the Commission does not consider bare, unsupported assertions in its adjudications; CLI-05-16, 62 NRC 1 (2005)
the Commission rejects arguments that are filed, without justification, for the first time on appeal; CLI-05-16, 62 NRC 1 (2005)
the contention pleading rule helps to ensure that full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions; LBP-05-16, 62 NRC 56 (2005)
the NRC adjudicatory process is not the proper venue for the evaluation of a petitioner's personal view regarding the direction regulatory policy should take; LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)
the proponent of a contention must provide a brief explanation of the basis for the contention; LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005); LBP-05-32, 62 NRC 813 (2005)
the purpose of the contention rule is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-05-28, 62 NRC 585 (2005)
the reach of a contention necessarily hinges upon its terms coupled with its stated bases; LBP-05-28, 62 NRC 585 (2005)
there must be some significant link between the claimed deficiency and either the health and safety of the public or of the environment; LBP-05-28, 62 NRC 585 (2005)
to litigate a NEPA claim that the Staff failed to take a ''hard look'' at a significant environmental question, an intervenor must allege with adequate support that the Staff unduly ignored or minimized pertinent environmental effects; LBP-05-26, 62 NRC 446 (2005)
to succeed on the merits of a financial assurance challenge, an intervenor must demonstrate that relevant uncertainties significantly greater than those that usually cloud business outlooks exist; LBP-05-21, 62 NRC 248 (2005)
where requisite support for contentions is lacking, a board should not make assumptions of fact that favor the petitioner or supply information that is lacking; LBP-05-28, 62 NRC 585 (2005)
CONTENTIONS, LATE-FILED
a motion for leave to file a new contention, filed within the 20-day time period previously set by the board, satisfies the requirement that such motions be filed in a timely fashion; LBP-05-32, 62 NRC 813 (2005)
a nontimely filing will not be considered by a licensing board absent a showing that, based upon a balancing of eight factors, the request should be entertained; LBP-05-19, 62 NRC 134 (2005)

contentions based on applicant's environmental report may be amended or new contentions may be filed if there are data or conclusions in the NRC draft or final environmental impact statement that differ significantly from the data or conclusions in the applicant's documents; CLI-05-20, 62 NRC 523 (2005)
if a new contention is timely under section 2.309(f)(2)(iii), then it appears contradictory to rule that it must also satisfy the eight factors in section 2.309(c) for nontimely filings; LBP-05-32, 62 NRC 813 (2005)
if a petitioner cannot show good cause, then its demonstration on the other factors must be compelling; CLI-05-24, 62 NRC 551 (2005)
in admissibility determinations, the good-cause factor is given the most weight; CLI-05-24, 62 NRC 551 (2005)
potential for delay or expansion of proceeding weighs against accepting a petition that would reopen a closed administrative adjudicatory record; CLI-05-24, 62 NRC 551 (2005)
to demonstrate good cause, a petitioner must show not only why it could not have filed within the time specified in the notice of opportunity for hearing, but also that it filed as soon as possible thereafter; CLI-05-24, 62 NRC 551 (2005); LBP-05-19, 62 NRC 134 (2005)
COST-BENEFIT ANALYSES
alleged errors or discrepancies in underlying data for a privately sponsored project should not be subjected to a stricter test than the ''not so distorted as to impair fair consideration'' test for a federally owned project; LBP-05-19, 62 NRC 134 (2005)
an early site permit is only a partial construction permit and NRC regulations expressly postpone any benefits analysis until later; CLI-05-17, 62 NRC 5 (2005); CLI-05-29, 62 NRC 801 (2005)
comparison among the technological alternatives does not raise a material issue in an ESP proceeding; CLI-05-29, 62 NRC 801 (2005)
determination of economic benefits and costs that are tangential to environmental consequences are within a wide area of agency discretion; CLI-05-28, 62 NRC 721 (2005)
financial estimates related to the ''cost'' of power are not the same costs that are required to be analyzed at the early site permit application stage; LBP-05-19, 62 NRC 134 (2005)
in uranium enrichment facility construction permit proceedings, a board's duty to conduct, at this stage of the proceedings, the weighing specified in section 51.105(a)(3) is beyond question; CLI-05-17, 62 NRC 5 (2005)
NRC leaves to licensees the ongoing business decisions that relate to costs and profit; CLI-05-28, 62 NRC 721 (2005)
the test in considering challenges to the accuracy of economic assumptions underlying the analysis of a federally owned project is whether the economic considerations were so distorted as to impair fair consideration of those environmental consequences; LBP-05-19, 62 NRC 134 (2005)
COSTS
See Decommissioning Costs
COUNCIL ON ENVIRONMENTAL QUALITY
CEQ regulations are not binding on the NRC because the agency has not expressly adopted them, but they have been considered and relevant concepts adopted by the NRC through its own Part 51 regulations; LBP-05-19, 62 NRC 134 (2005)
CRUISE MISSILES
no statistically significant threat to a facility exists when undisputed evidence is given that no missiles would be tested within 10 nautical miles of a proposed facility and no such missile has crashed more than 1 mile off its flight path; CLI-05-19, 62 NRC 403 (2005)
CULTURAL RESOURCES
an agency must reasonably consider the historic and cultural resources in an affected area, assess the impact of the proposed action, and reasonable alternatives to that action, on cultural resources, disseminate the relevant facts and assessments for public comment, and respond to legitimate concerns; LBP-05-26, 62 NRC 446 (2005)
historic and cultural resources that can reasonably be expected to be affected by the proposed federal action must be considered in environmental report; LBP-05-28, 62 NRC 585 (2005)
CULTURAL SENSITIVITY
insensitivity to a tribal group does not, standing alone, violate the National Historic Preservation Act; LBP-05-26, 62 NRC 446 (2005)

SUBJECT INDEX

DEADLINES
listing of a document on a privilege log is the occurrence or circumstance that triggers the 10-day period for the filing of a motion challenging the asserted privilege; LBP-05-33, 62 NRC 828 (2005)
DECOMMISSIONING COSTS
ISFSI applicants are required to perform periodic rather than annual reviews of their cost estimates; LBP-05-22, 62 NRC 328 (2005)
there is no requirement for including potential accident recovery costs within cost estimates; LBP-05-22, 62 NRC 328 (2005)
DECOMMISSIONING PLANS
a preliminary decommissioning plan must include means of adjusting cost estimates and associated funding levels periodically over the life of the ISFSI; LBP-05-22, 62 NRC 328 (2005)
a proceeding involving a decommissioning plan for cleanup of depleted uranium munitions is reinstated; LBP-05-25, 62 NRC 435 (2005)
DEFAULT
a presiding officer has the discretion to dismiss a contention where a sponsoring party does not pursue it at hearing; LBP-05-22, 62 NRC 328 (2005)
DEFENSE-IN-DEPTH POLICY
this philosophy requires application of conservative codes and standards, high quality in design, construction, and operation of nuclear plants to reduce the likelihood of malfunctions, redundancy in safety systems and components, and containment structures and other safety features to mitigate the release of fission products offsite; DD-05-2, 62 NRC 389 (2005)
DEFINITIONS
''circulated draft'' is a nonfinal document circulated for supervisory concurrence or signature in which the original author or others in the concurrence process have non-concurred; CLI-05-27, 62 NRC 715 (2005); LBP-05-27, 62 NRC 478 (2005)
''documentary material'' includes all reports and studies, prepared by or on behalf of a potential party, including all related 'circulated drafts; CLI-05-27, 62 NRC 715 (2005)
''rule'' is defined as an agency statement of future effect; LBP-05-26, 62 NRC 446 (2005)
DELAY OF PROCEEDING
potential for delay or expansion of proceeding weighs against accepting a petition that would reopen a closed administrative adjudicatory record; CLI-05-24, 62 NRC 551 (2005)
the fact that a petitioner's participation will broaden the issues and delay the proceeding receives relatively less weight in a license renewal proceeding brought over a decade before the expiration of the first of the existing licenses; LBP-05-16, 62 NRC 56 (2005)
time consumed by applicant-Staff interaction in refining an application cannot necessarily be attributed to the adjudicatory process or to the board's oversight of that process, especially because boards have no supervisory power over the Staff's performance of its regulatory review activities; LBP-05-29, 62 NRC 635 (2005)
DELIBERATIVE PROCESS PRIVILEGE
internal communications between Staff members about the adequacy of a license application, the potential need to request additional information, and evaluation of the adequacy of responses to RAIs are a legitimate part of the thought processes and deliberations by the Staff and can qualify as ''deliberative''; LBP-05-33, 62 NRC 828 (2005)
listing of a document on a privilege log, identifying its date, author, addressee, and subject matter, and labeling it as ''deliberative process privileged'' does not provide sufficient information for assessing the claim of privilege; LBP-05-33, 62 NRC 828 (2005)
listing of a document on a privilege log is the occurrence or circumstance that triggers the 10-day period for the filing of a motion challenging the asserted privilege; LBP-05-33, 62 NRC 828 (2005)
NRC regulations clearly waive the privilege for all circulated drafts; LBP-05-27, 62 NRC 478 (2005)
NRC Staff's decision to claim, assert, or invoke the deliberative process privilege over a document must be made by a person, such as the head of the relevant department or division, who has both the expertise and an overview-type perspective to balance the NRC's general duty of disclosure versus its need to conduct frank internal debate without the chilling effect of public scrutiny; LBP-05-33, 62 NRC 828 (2005)

the government agency claiming the privilege has the initial burden of showing, not merely asserting, that the document qualifies for the privilege; LBP-05-33, 62 NRC 828 (2005)
the level of the deliberations may be a factor in assessing the extent of the chill that disclosure of the document might cause and in balancing this consideration against the movant's need for the documents; LBP-05-33, 62 NRC 828 (2005)
the litigant seeking the document can overcome the privilege by showing that it has an overriding need for the document; LBP-05-33, 62 NRC 828 (2005)
the requirement that motions to compel be accompanied by a certification that the moving party has made a sincere effort to contact the other parties and resolve the issues does not extend the 10-day period for the filing of motion; LBP-05-33, 62 NRC 828 (2005)
to qualify, information be both predecisional and deliberative; LBP-05-33, 62 NRC 828 (2005)
DEMAND FOR INFORMATION
other methods are available to inspectors to obtain design basis information from a licensee, rendering a demand unnecessary for the purposes of the inspection; DD-05-2, 62 NRC 389 (2005)
DEPARTMENT OF ENERGY
DOE must make its certification of the availability of required documents at least 6 months prior to submitting its license application; CLI-05-27, 62 NRC 715 (2005)
DEPLETED URANIUM
a proceeding involving a decommissioning plan for cleanup of munitions is reinstated; LBP-05-25, 62 NRC 435 (2005)
petitioner's request for remediation and mitigation of conditions resulting from test-firing of DU munitions is considered insofar as it relates to the decontamination and decommissioning of nuclear facilities; DD-05-8, 62 NRC 866 (2005)
pyrophoric characteristics, radiological hazard, and chemical toxicity of test-fired munitions are discussed; DD-05-8, 62 NRC 866 (2005)
DESIGN BASIS
other methods are available to inspectors to obtain design basis information from a licensee, rendering a Demand for Information unnecessary for the purposes of the inspection; DD-05-2, 62 NRC 389 (2005)
DISCLOSURE
an inadequate privilege log is particularly problematic in Subpart L proceedings because no other discovery is allowed and the party filing the motion to compel is forced to shoot in the dark and face a substantive answer by the privilege claimant, without the right to reply; LBP-05-33, 62 NRC 828 (2005)
in Subpart L proceedings, Staff is subject to mandatory disclosure obligations to file and update the hearing file and to disclose and/or provide certain additional documents; LBP-05-33, 62 NRC 828 (2005)
Staff's obligations in Subpart L proceedings are not limited to documents that are relevant to the admitted contentions and thus are broader than the disclosure obligations of other parties; LBP-05-33, 62 NRC 828 (2005)
the level of the deliberations may be a factor in assessing the extent of the chill that disclosure of the document might cause and in balancing this consideration against the movant's need for the documents; LBP-05-33, 62 NRC 828 (2005)
there is no balancing of the government's duty to protect safeguards information against the public interest in disclosure; CLI-05-22, 62 NRC 542 (2005)
DISCOVERY
revised requirements for a tiered process in a materials license amendment proceeding are intended to significantly reduce the delays and resources expended by all parties; CLI-05-23, 62 NRC 546 (2005)
DISCOVERY AGAINST NRC STAFF
a decision to claim, assert, or invoke the deliberative process privilege over a document must be made by a person, such as the head of the relevant department or division, who has both the expertise and an overview-type perspective to balance the NRC's general duty of disclosure versus its need to conduct frank internal debate without the chilling effect of public scrutiny; LBP-05-33, 62 NRC 828 (2005)
an inadequate privilege log is particularly problematic in Subpart L proceedings because no other discovery is allowed and the party filing the motion to compel is forced to shoot in the dark and face

a substantive answer by the privilege claimant, without the right to reply; LBP-05-33, 62 NRC 828 (2005)
internal communications between Staff members about the adequacy of a license application, the potential need to request additional information, and evaluation of the adequacy of responses to RAIs are a legitimate part of the thought processes and deliberations by the Staff and can qualify as ''deliberative'' under the deliberative process privilege; LBP-05-33, 62 NRC 828 (2005)
Staff's disclosure obligations in Subpart L proceedings are not limited to documents that are relevant to the admitted contentions and thus are broader than the disclosure obligations of other parties; LBP-05-33, 62 NRC 828 (2005)
Staff's full compliance with the two mandatory disclosure requirements in Subpart L proceedings are the foundation of the fairness and integrity of these proceedings, because no other discovery from the Staff is allowed in such proceedings; LBP-05-33, 62 NRC 828 (2005)
the requirement that the privilege claimant provide, without further order or request, sufficient information for assessing the claim of privilege, is closely related to the 10-day requirement for filing motions to compel; LBP-05-33, 62 NRC 828 (2005)
DISMISSAL OF PROCEEDING
Commission reinstatement of a docket and direction that further adjudication be conducted by a licensing board rather than the presiding officer and special assistant renders the presiding officer's proceeding moot; LBP-05-30, 62 NRC 733 (2005)
DOCUMENT PRODUCTION
an inadequate privilege log is particularly problematic in Subpart L proceedings because no other discovery is allowed and the party filing the motion to compel is forced to shoot in the dark and face a substantive answer by the privilege claimant, without the right to reply; LBP-05-33, 62 NRC 828 (2005)
''circulated draft'' is defined as a nonfinal document circulated for supervisory concurrence or signature in which the original author or others in the concurrence process have non-concurred; LBP-05-27, 62 NRC 478 (2005)
Class 1 ''reliance'' documentary material is any information upon which a potential party intends to rely and/or cite in support of its position in the proceeding; LBP-05-27, 62 NRC 478 (2005)
Class 2 ''nonsupporting'' documentary material is any information that is known to, and in the possession of, or developed by the party that is relevant to, but does not support, Class 1 information or that party's position; LBP-05-27, 62 NRC 478 (2005)
DOE must make its certification of the availability of required documents at least 6 months prior to submitting its license application; CLI-05-27, 62 NRC 715 (2005)
each participant in the high-level waste repository licensing proceeding must place on the Licensing Support Network all documentary material, including circulated drafts but excluding preliminary drafts, on which the participant intends to rely or that are relevant; CLI-05-27, 62 NRC 715 (2005)
even documents without a signature, such as memoranda and e-mails, if finalized, treated as final, or delivered to the intended addressees, can be final documents; LBP-05-27, 62 NRC 478 (2005)
internal communications between Staff members about the adequacy of a license application, the potential need to request additional information, and evaluation of the adequacy of responses to RAIs are a legitimate part of the thought processes and deliberations by the Staff and can qualify as ''deliberative''; LBP-05-33, 62 NRC 828 (2005)
NRC regulations clearly waive the deliberative process privilege for all circulated drafts; LBP-05-27, 62 NRC 478 (2005)
parties in the pre-application phase of the high-level waste repository proceeding shall make available all documentary material including circulated drafts but excluding preliminary drafts; LBP-05-27, 62 NRC 478 (2005)
should a draft document satisfy the five criteria in the definition of circulated draft, the draft document must be made available on the Licensing Support Network if a decision is made not to finalize the draft document or if a substantial period of time has passed with no further action on the draft document; LBP-05-27, 62 NRC 478 (2005)
Staff's disclosure obligations in Subpart L proceedings are not limited to documents that are relevant to the admitted contentions and thus are broader than the disclosure obligations of other parties; LBP-05-33, 62 NRC 828 (2005)

state's motion to compel production of applicant's draft license application is granted; LBP-05-27, 62 NRC 478 (2005)
the test for determining whether a dual-purpose document is prepared in anticipation of litigation is if, in light of the nature of the document and the factual situation in the particular case, the document can fairly be said to have been prepared or obtained because of the prospect of litigation; LBP-05-27, 62 NRC 478 (2005)
whether or not a document fits the ''nonsupporting'' category is determined from the perspective of the potential party producing the document; LBP-05-27, 62 NRC 478 (2005)
whether or not a potential party intends to rely upon or to cite a document is determined from the perspective of the potential party that is producing the document on the Licensing Support Network; LBP-05-27, 62 NRC 478 (2005)
DOSE LIMITS
regulatory limits for uranium are discussed; DD-05-8, 62 NRC 866 (2005)
EARLY SITE PERMIT APPLICATION
although the Staff may rely on the environmental report in preparation of its environmental impact statement, it must also independently evaluate and be responsible for the reliability of all information used in the draft EIS; LBP-05-19, 62 NRC 134 (2005)
an environmental report need not include an assessment of the benefits; LBP-05-19, 62 NRC 134 (2005)
federal agencies take a ''hard look'' at the environmental impacts of a proposed major federal action, and at alternatives to that action; LBP-05-19, 62 NRC 134 (2005)
financial estimates related to the ''cost'' of power are not the same costs that are required to be analyzed under NEPA at this stage; LBP-05-19, 62 NRC 134 (2005)
issues to be addressed in both contested and uncontested proceedings are described; CLI-05-17, 62 NRC 5 (2005)
the Commission shall hold a hearing on each application for a construction permit for a utilization or production facility; CLI-05-17, 62 NRC 5 (2005)
the environmental impact statement need not include an assessment of the benefits of the proposed action; LBP-05-19, 62 NRC 134 (2005)
the environmental report must describe the proposed action, state its purposes, describe the environment affected, and discuss the impacts of the proposed action in proportion to their significance and alternatives to the proposed action; LBP-05-19, 62 NRC 134 (2005)
the requirement that the Commission shall conduct a single adjudicatory hearing with regard to the licensing of construction and operation of a uranium enrichment facility resulted from Congress's belief that separate hearings at both the construction permit and operating license stages constituted overjudicialization of the licensing process; CLI-05-17, 62 NRC 5 (2005)
EARLY SITE PERMIT PROCEEDING
baseline NEPA questions are whether the NEPA process has been complied with, what is the appropriate final balance among conflicting factors, and whether the construction permit should be issued, denied, or appropriately conditioned; CLI-05-17, 62 NRC 5 (2005)
boards in early site permit cases cannot perform cost-benefit weighing because an ESP is only a partial construction permit; CLI-05-17, 62 NRC 5 (2005); CLI-05-29, 62 NRC 801 (2005)
boards must independently consider the final balance among conflicting factors contained in the record of the proceeding; CLI-05-17, 62 NRC 5 (2005)
boards' ''reasonable alternatives'' responsibilities are limited because the proceeding is focused on an appropriate site, not the actual construction of a reactor; CLI-05-17, 62 NRC 5 (2005)
ECONOMIC EFFECTS
determination of economic benefits and costs that are tangential to environmental consequences are within a wide area of agency discretion; CLI-05-28, 62 NRC 721 (2005)
ECONOMIC INJURY
litigation expense, even substantial and unrecoupable cost, does not constitute irreparable injury; CLI-05-27, 62 NRC 715 (2005)
ECONOMIC INTERESTS
the test in considering challenges to the accuracy of economic assumptions underlying the analysis of a federally owned project is whether the economic considerations were so distorted as to impair fair consideration of those environmental consequences; LBP-05-19, 62 NRC 134 (2005)

SUBJECT INDEX

ECONOMIC ISSUES
NRC leaves to licensees the ongoing business decisions that relate to costs and profit; CLI-05-28, 62 NRC 721 (2005)
EMERGENCY NOTIFICATION SYSTEM
an effective and continual tone-alert radio distribution and maintenance program should be established; DD-05-3, 62 NRC 765 (2005)
backup route alerting occurs anywhere within the 10-mile EPZ and is used in the event of a failure of a part of the primary alert and notification system; DD-05-3, 62 NRC 765 (2005)
exception area route alerting occurs in areas 5 to 10 miles from the nuclear plant in areas specified in the offsite response organization's plan to which the 15-minute alerting and notification does not apply; DD-05-3, 62 NRC 765 (2005)
exception area route alerting should be completed within 45 minutes of the decision by authorized offsite officials to activate the alert and notification system; DD-05-3, 62 NRC 765 (2005)
exception areas are reviewed and approved by FEMA on a case-by-case basis and generally are remote areas, rural areas, open-water areas, rivers, hunting areas, recreational areas, private compounds, beaches, national forests, and other low-population areas that require special alerting and notification procedures; DD-05-3, 62 NRC 765 (2005)
primary route alerting is the primary method of alerting and notifying the public anywhere within the 10-mile EPZ in areas not covered by sirens and should be completed within 15 minutes of the decision by authorized offsite officials to activate the alert and notification system; DD-05-3, 62 NRC 765 (2005)
EMERGENCY PLANNING
a governmental entity's overriding, paramount interest in, and responsibility for, emergency planning prevents that interest from being represented by existing parties; LBP-05-16, 62 NRC 56 (2005)
it is appropriate for the Commission to consider whether an exemption should be granted to consider emergency planning concerns of an adjacent county in another state to be addressed in a license renewal proceeding; LBP-05-16, 62 NRC 56 (2005)
the Commission accepts certification of a question relating to an exemption from a regulation barring litigation of emergency planning issues in a license renewal proceeding; CLI-05-18, 62 NRC 185 (2005)
these issues are excluded from license renewal proceedings to limit the scope of those proceedings to age-related degradation unique to license renewal; CLI-05-24, 62 NRC 551 (2005); LBP-05-31, 62 NRC 735 (2005)
EMERGENCY PLANNING ZONES
a county is free to make its own plans for areas farther removed than the geographic bounds set by applicable regulations, but doing so is within its bailiwick, not the NRC's; LBP-05-16, 62 NRC 56 (2005)
ENERGY EFFICIENCY
consideration of this alternative to a project would be appropriate only if the project's purpose was to meet future energy needs in the area; CLI-05-29, 62 NRC 801 (2005)
ENFORCEMENT ACTIONS
a licensing board's skepticism about the efficacy of 2.206 petitions is entirely unwarranted and inappropriate in light of the number of Director Decisions that have granted relief over the past decade; CLI-05-24, 62 NRC 551 (2005)
a petitioner that fails to qualify for an exemption from the rule prohibiting challenges to NRC regulations may file a petition under section 2.206; CLI-05-24, 62 NRC 551 (2005)
ENVIRONMENTAL ANALYSIS
a licensing board's role is to ensure that the agency has taken the requisite ''hard look'' at the potential environmental effects of the proposed action and its reasonable alternatives; LBP-05-19, 62 NRC 134 (2005)
a NEPA analysis often must rely upon imprecise and uncertain data, particularly when forecasting future markets and technologies, and such forecasts provide no absolute answers and must be judged on their reasonableness; LBP-05-19, 62 NRC 134 (2005)
challenges that question the NEPA analysis performed in a relicensing proceeding to develop a generic environmental impact analysis constitute an impermissible attack on agency regulations; LBP-05-31, 62 NRC 735 (2005)

environmental impact statements typically incorporate by reference other analyses and data by citing to the material and describing its content; CLI-05-28, 62 NRC 721 (2005)
financial estimates related to the ''cost'' of power are not the same costs that are required to be analyzed under NEPA at the early site permit application stage; LBP-05-19, 62 NRC 134 (2005)
NEPA calls for an estimate of anticipated, not unduly speculative, impacts rather than certainty or precision; CLI-05-20, 62 NRC 523 (2005)
where a federal agency is not the sponsor of the project, the federal government's consideration of alternatives may accord substantial weight to the preferences of the applicant in the design of the project; LBP-05-19, 62 NRC 134 (2005)
where applicant has no business connection to the end users of its electricity and therefore no ability to implement demand-side management, demand-side management is not a reasonable alternative and NEPA itself, therefore, does not require its examination; LBP-05-19, 62 NRC 134 (2005)
ENVIRONMENTAL IMPACT STATEMENT
a reasonably close causal relationship between an alleged environmental effect and the alleged cause is required; CLI-05-28, 62 NRC 721 (2005)
a reviewing agency should take into account the applicant's goals for the project; CLI-05-29, 62 NRC 801 (2005)
a thorough, reasoned discussion of the relevant environmental considerations is required; LBP-05-19, 62 NRC 134 (2005)
although the Staff may rely on the environmental report in preparation of its EIS, it must also independently evaluate and be responsible for the reliability of all information used in the draft EIS; LBP-05-19, 62 NRC 134 (2005)
contentions based on applicant's environmental report may be amended or new contentions may be filed if there are data or conclusions in the NRC DEIS or FEIS that differ significantly from the data or conclusions in the applicant's documents; CLI-05-20, 62 NRC 523 (2005)
energy efficiency would be a possible alternative to a project only if the project's purpose was to meet future energy needs in the area; CLI-05-29, 62 NRC 801 (2005)
for an application for an early site permit, assessment of the benefits of the proposed action need not be included; LBP-05-19, 62 NRC 134 (2005)
intervenors must show that any claimed mistake is significant and material; CLI-05-29, 62 NRC 801 (2005)
licensing boards do not sit to flyspeck environmental documents or to add details or nuances; CLI-05-29, 62 NRC 801 (2005)
NEPA analyses are subject to a rule of reason which teaches that only the significant aspects of the probable environmental impact of the proposed agency action need to be discussed; LBP-05-19, 62 NRC 134 (2005)
NEPA-related terrorism issues are not appropriately addressed in an EIS; LBP-05-31, 62 NRC 735 (2005)
NRC is not required to select any particular options, but simply prescribes the necessary process; LBP-05-19, 62 NRC 134 (2005)
NRC need not consider alternative ways to achieve a general goal, but should, instead, focus upon evaluating the alternative means by which a particular applicant reaches its goals; LBP-05-19, 62 NRC 134 (2005)
other analyses and data typically are incorporated by reference by citing to the material and describing its content; CLI-05-28, 62 NRC 721 (2005)
the NEPA review process does not extend to all conceivable consequences of agency decisions, no matter how far down the causal chain from a licensing decision and no matter how unpredictable; CLI-05-28, 62 NRC 721 (2005)
ENVIRONMENTAL REPORT
applicant is only required to consider feasible, nonspeculative alternatives, and the range of alternatives need not extend beyond those reasonably related to the purposes or goals of the proposed project; LBP-05-31, 62 NRC 735 (2005)
applicant is required to provide a discussion of alternatives to the proposed action that is sufficiently complete to aid the Commission in developing and exploring appropriate alternatives to the recommended course of action; LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)

contentions based on applicant's ER may be amended or new contentions may be filed if there are data or conclusions in the NRC draft or final environmental impact statement that differ significantly from the data or conclusions in the applicant's documents; CLI-05-20, 62 NRC 523 (2005)
for an early site permit, an assessment of benefits need not be included; LBP-05-19, 62 NRC 134 (2005)
for an early site permit, this must contain a description of the proposed action, a statement of its purposes, and a description of the environment affected; LBP-05-19, 62 NRC 134 (2005)
historic and cultural resources that can reasonably be expected to be affected by the proposed federal action must be considered in the description of the environment affected by a proposed project; LBP-05-28, 62 NRC 585 (2005)
NRC regulations require that applicant describe the environment affected by a proposed project; LBP-05-28, 62 NRC 585 (2005)
only alternatives reasonably related to the goals of the proposed action as well as the no-action alternative need to be considered; LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)
ENVIRONMENTAL REVIEW
a board's finding of fact was not clearly erroneous where the board found that an alternative facility using a combination of technologies was not environmentally preferable to the proposed nuclear power plant; CLI-05-29, 62 NRC 801 (2005)
licensing boards do not sit to flyspeck environmental documents or to add details or nuances; CLI-05-29, 62 NRC 801 (2005)
EVIDENCE
boards subject the Staff's evidence to the same scrutiny as that of the other parties; LBP-05-29, 62 NRC 635 (2005)
licensing boards need not demand that all possible views and facts relating in any way to the matters in question be placed in the evidentiary record; CLI-05-17, 62 NRC 5 (2005)
presiding officers have accorded less weight to the testimony of a witness acknowledging no expertise in a specific area; LBP-05-22, 62 NRC 328 (2005)
EXEMPTIONS
for the Commission to grant an exemption or waiver of section 50.47(a)(1), and thereby permit the adjudication of emergency-planning issues in a license renewal proceeding, four conditions must be met; CLI-05-24, 62 NRC 551 (2005)
proximity to a nuclear power facility located in an adjoining state does not constitute the ''unique circumstances'' that will satisfy the third requirement for an exemption from the bar against challenging regulations in an adjudication; CLI-05-24, 62 NRC 551 (2005)
FEDERAL REGISTER
an NRC notice of hearing opportunity is legally adequate notice if published in; CLI-05-24, 62 NRC 551 (2005)
FEDERAL RULES OF EVIDENCE
these rules provide a standard to gauge a witness's expert status, but are not binding and serve only as guidance for presiding officers; LBP-05-22, 62 NRC 328 (2005)
FINAL SAFETY ANALYSIS REPORT
description of the facility, the design bases and the limits on its operation, and a safety analysis of the structures, systems, and components and of the facility as a whole are required; DD-05-2, 62 NRC 389 (2005)
historical information is information that was accurate at the time the plant was originally licensed, but is not intended or expected to be updated for the life of the plant, is not affected by changes to the plant or its operation, and does not change with time; DD-05-2, 62 NRC 389 (2005)
operators of nuclear power plants must periodically update the FSAR originally submitted as part of the operating license application, to ensure that the report contains the latest information developed; DD-05-2, 62 NRC 389 (2005)
FINANCIAL ASSURANCE
a passthrough mechanism to cover O&M costs is an appropriate method for establishing; LBP-05-23, 62 NRC 373 (2005)
an applicant for a Part 72 license need not include preconstruction costs in its cost estimates; LBP-05-21, 62 NRC 248 (2005)

an ISFSI applicant is allowed to submit estimates based on the 40-year anticipated term of the facility, rather than being limited to the initial 20-year license period; LBP-05-21, 62 NRC 248 (2005)
in the context of an ISFSI licensing proceeding, license conditions could be an acceptable method for providing reasonable assurance of an applicant's financial qualifications; LBP-05-21, 62 NRC 248 (2005); LBP-05-23, 62 NRC 373 (2005)
preconstruction costs are outside the scope of the regulations as are any contentions related to those regulations; LBP-05-21, 62 NRC 248 (2005)
remediation cost estimates associated with in situ uranium leach mining are challenged; LBP-05-17, 62 NRC 77 (2005)
the level of precision required in the accuracy of an applicant's cost estimates does not require that the applicant await actual contract ''bid'' information before preparing its cost estimates; LBP-05-21, 62 NRC 248 (2005)
to succeed on the merits of a contention, an intervenor must demonstrate that relevant uncertainties significantly greater than those that usually cloud business outlooks exist; LBP-05-21, 62 NRC 248 (2005)
FINANCIAL QUALIFICATIONS
applicant must demonstrate by a preponderance of the evidence that it has established the requisite reasonable assurance in connection with its estimated construction costs and the estimated operating costs over the planned life of the facility; LBP-05-21, 62 NRC 248 (2005)
applicant must have funding fully committed prior to construction and its prices must be sufficient to cover facility O&M and decommissioning costs; LBP-05-20, 62 NRC 187 (2005)
applicant must submit sufficient information to show that it either possesses the necessary funds or has reasonable assurance of obtaining them, to cover estimated construction costs operating costs over the planned life of the facility; LBP-05-21, 62 NRC 248 (2005)
for an independent spent fuel storage installation, a cost passthrough contract with a state-regulated utility is adequate; LBP-05-20, 62 NRC 187 (2005)
the Commission will accept financial assurances based on plausible assumptions and forecasts, even though the possibility is not insignificant that things will turn out less favorably than expected; LBP-05-21, 62 NRC 248 (2005)
FINDINGS OF FACT
a ''clearly erroneous'' finding is one that is not even plausible in light of the record viewed in its entirety; CLI-05-19, 62 NRC 403 (2005)
absent a showing that the board's fact-specific rulings were clearly erroneous, the Commission generally defers to the board on matters of factual findings; CLI-05-16, 62 NRC 1 (2005)
the likelihood that a reviewing body will rely on the presumption of correctness of a trial court's factual determinations tends to increase when trial judges have lived with the controversy for weeks or months instead of just a few hours; CLI-05-19, 62 NRC 403 (2005)
FIRE BARRIERS
concern with the quality of the fire barriers is resolved by licensee's replacement of Hemyc in systems that are credited in the plant safe shutdown capability analysis; DD-05-7, 62 NRC 862 (2005)
FUEL CYCLE RULE
an applicant for an early site permit is permitted to rely upon Table S-3 to evaluate the effects of the uranium fuel cycle; LBP-05-19, 62 NRC 134 (2005)
GENERAL DESIGN CRITERIA
the Commission does not apply Appendix A of Part 50 (the final GDC) to plants with construction permits issued prior to May 21, 1971, because the regulatory standard for such plants is plant-specific and is documented in the license, the licensing safety evaluation report, and the FSAR; DD-05-2, 62 NRC 389 (2005)
GENERIC ISSUES
the appropriate means for requesting Commission consideration is a petition for rulemaking; CLI-05-24, 62 NRC 551 (2005)
GOVERNMENT PARTIES
government entities seeking to litigate their own contentions are held to the same pleading rules as everyone else; CLI-05-24, 62 NRC 551 (2005)

SUBJECT INDEX

GROUNDWATER CONTAMINATION
groundwater restoration at in situ uranium mining site would require flushing with 9 pore volumes; LBP-05-17, 62 NRC 77 (2005)
settlement agreement allows for downgradient offsite monitoring of groundwater for tritium; LBP-05-18, 62 NRC 126 (2005)
HEARING PROCEDURES
in an operating license amendment proceeding, a board must identify the specific procedures to be used on a contention-by-contention basis; LBP-05-32, 62 NRC 813 (2005)
licensing boards have considerable flexibility regarding the actual procedure to be followed; CLI-05-17, 62 NRC 5 (2005)
HEARING REQUESTS
if a petition in a licensing proceeding does not satisfy the legal requirements, the Atomic Safety and Licensing Board Panel or the Presiding Officer may refer the request to the section 2.206 process; DD-05-2, 62 NRC 389 (2005)
HEARING REQUIREMENTS
a ''sufficiency'' review of uncontested issues may prove suited to NRC Staff summaries of key safety and environmental findings, along with Staff witnesses prepared to answer board inquiries; CLI-05-17, 62 NRC 5 (2005)
''hearing'' can refer to any of a number of events, including trial-type evidentiary hearings, paper hearings, paper hearings accompanied by oral arguments, hearings employing a mixture of procedural rules, and legislative hearings; CLI-05-17, 62 NRC 5 (2005)
if uncontested issues prove relatively straightforward, a simple ''paper'' review may suffice; CLI-05-17, 62 NRC 5 (2005)
HEARING RIGHTS
an intervenor may not legitimately claim that a licensee's ability to make post-hearing determinations deprives the intervenor of its hearing rights by merely conjecturing that the licensee might violate prescribed procedures; LBP-05-17, 62 NRC 77 (2005)
Congress did not mean to require a hearing under the AEA where a hearing serves no purpose; LBP-05-17, 62 NRC 77 (2005)
the Commission should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing; LBP-05-31, 62 NRC 735 (2005)
verification by the NRC Staff that a licensee complies with preapproved design or testing criteria is a highly technical inquiry not particularly suitable for hearing; LBP-05-17, 62 NRC 77 (2005)
HEXAVALENT URANIUM TRIOXIDE
toxicity of combustion products of test-fired depleted uranium is discussed; DD-05-8, 62 NRC 866 (2005)
HIGH-LEVEL WASTE REPOSITORY
State's motion to compel production of applicant's draft license application is granted; LBP-05-27, 62 NRC 478 (2005)
HISTORIC SITES
historic and cultural resources that can reasonably be expected to be affected by the proposed federal action must be considered in an environmental report; LBP-05-28, 62 NRC 585 (2005)
IN SITU LEACH MINING
groundwater restoration would require flushing with 9 pore volumes; LBP-05-17, 62 NRC 77 (2005)
INCORPORATION BY REFERENCE
material incorporated in an environmental impact statement must be reasonably available for inspection by interested persons within the time allowed for comment; CLI-05-28, 62 NRC 721 (2005)
INDEPENDENT SPENT FUEL STORAGE INSTALLATION
a cost passthrough contract with a state-regulated utility is adequate to establish financial qualifications; LBP-05-20, 62 NRC 187 (2005)
applicant is allowed to engage in preconstruction activities such as site exploration and the procurement or manufacture of facility components before obtaining a construction permit; LBP-05-21, 62 NRC 248 (2005)
applicant is allowed to submit estimates based on the 40-year anticipated term of the facility, rather than being limited to the initial 20-year license period; LBP-05-21, 62 NRC 248 (2005)

applicant is required to perform periodic rather than annual reviews of decommissioning cost estimates; LBP-05-22, 62 NRC 328 (2005)
applicant must demonstrate by a preponderance of the evidence that it has established the requisite reasonable assurance in connection with its estimated construction costs and the estimated operating costs over the planned life of the facility; LBP-05-21, 62 NRC 248 (2005)
applicant need not include preconstruction costs in its cost estimates; LBP-05-21, 62 NRC 248 (2005)
license conditions could be an acceptable method for providing reasonable assurance of an applicant's financial qualifications; LBP-05-21, 62 NRC 248 (2005)
the amount of insurance is to be determined at hearing and included as a license condition; LBP-05-21, 62 NRC 248 (2005)
the financial assurance standard for Part 70 uranium enrichment facilities, rather than that for Part 50 power reactor facilities, is applicable to ISFSIs; LBP-05-23, 62 NRC 373 (2005)
there is no requirement for including potential accident recovery costs within decommissioning cost estimates; LBP-05-22, 62 NRC 328 (2005)
INDEPENDENT SPENT FUEL STORAGE INSTALLATION PROCEEDINGS
applicant must submit sufficient information to demonstrate its financial qualifications to carry out the activities for which the license is sought; LBP-05-21, 62 NRC 248 (2005)
INJURY IN FACT
a generalized grievance shared in substantially equal measure by all or a large class of citizens will not result in a distinct and palpable harm sufficient to support standing; LBP-05-31, 62 NRC 735 (2005)
an allegation of a special interest in a proceeding, no matter how longstanding, without a showing of a particularized harm is insufficient to establish standing; LBP-05-31, 62 NRC 735 (2005)
general interest in electric and nuclear issues or particular interest in a specific nuclear facility do not demonstrate injury; CLI-05-26, 62 NRC 577 (2005)
under the traditional test for standing, petitioner must demonstrate (among other things) that the proposed license transfer would injure his or her financial, property, or other interests; CLI-05-25, 62 NRC 572 (2005)
INSURANCE
reactor licensees maintain a minimum coverage of $1.06 billion, or the amount generally available from private sources, whichever is less; LBP-05-21, 62 NRC 248 (2005)
the amount of insurance an ISFSI applicant must obtain is to be determined at hearing and included as a condition on its ISFSI license; LBP-05-21, 62 NRC 248 (2005)
there is no requirement for including potential accident recovery costs within decommissioning cost estimates; LBP-05-22, 62 NRC 328 (2005)
INTERESTED GOVERNMENTAL ENTITY
automatic full-participation standing is conferred on governmental bodies if they have jurisdiction over the geographical area in which the reactor at issue is located; LBP-05-16, 62 NRC 56 (2005)
INTERVENORS
security clearances must be terminated at the conclusion of the proceeding; LBP-05-15, 62 NRC 53 (2005)
the scope of their participation in adjudications is limited to their admitted contentions; CLI-05-17, 62 NRC 5 (2005)
INTERVENTION
in addition to establishing standing, an intervention petitioner must also set forth at least one admissible contention; LBP-05-31, 62 NRC 735 (2005)
rules on contention admissibility are strict by design; LBP-05-31, 62 NRC 735 (2005)
the Commission should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing; LBP-05-28, 62 NRC 585 (2005)
the purpose of the contention rule is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)
INTERVENTION PETITIONS
e-mail filings may be refused acceptance unless, within 2 days after the electronic filing, an original and two copies of these documents, in the format specified in section 2.304(b), are mailed to the Commission's Rulemakings and Adjudications Staff; LBP-05-28, 62 NRC 585 (2005)

failure to present factual information and expert opinions necessary to adequately support a contention requires that the contention be rejected; LBP-05-28, 62 NRC 585 (2005)
petitioners must challenge and identify either specific portions of, or alleged omissions from, the application, and provide the supporting reasons for each dispute; LBP-05-31, 62 NRC 735 (2005)
INTERVENTION PETITIONS, LATE-FILED
a governmental entity's overriding, paramount interest in, and responsibility for, emergency planning prevents that interest from being represented by existing parties; LBP-05-16, 62 NRC 56 (2005)
arguments relating to good cause for late filing about the insufficiencies of constructive notice are inconsequential in light of the adoption of a legislative resolution demonstrating that the petitioner county government had actual notice of the proposed license renewals at a relatively early date; LBP-05-16, 62 NRC 56 (2005)
if a petition in a licensing proceeding does not satisfy the legal requirements, the Atomic Safety and Licensing Board Panel or the Presiding Officer may refer the request to the section 2.206 process; DD-05-2, 62 NRC 389 (2005)
in terms of whether it can reasonably be expected that a petitioner's participation would assist in developing a sound record, weaknesses in timing and content of an initial filing can be overcome by subsequent written filings, as well as by an oral demonstration of a sense of purpose and a commitment to participate and to contribute; LBP-05-16, 62 NRC 56 (2005)
nongovernmental prospective intervenors may be held to a higher standard for contention pleading than governmental entities in order to ensure that they have made a serious commitment to the process, have come forward with a specific focus, and are capable of making a knowledgeable contribution on real issues; LBP-05-16, 62 NRC 56 (2005)
problems inherent in the petitioner county government's efforts, under a new administration, to launch its participation in an unfamiliar forum governed by specialized rules do not establish good cause for its belatedness; LBP-05-16, 62 NRC 56 (2005)
the board finds no basis for treating section 2.206 petitions as a practical ''other means'' available for protecting petitioner's interests within the meaning of the fifth factor in the regulatory criteria for late-filed intervention petitions; LBP-05-16, 62 NRC 56 (2005)
the fact that a petitioner's participation will broaden the issues and delay the proceeding receives relatively less weight in a license renewal proceeding brought over a decade before the expiration of the first of the existing licenses; LBP-05-16, 62 NRC 56 (2005)
the need for balancing all the relevant factors, regardless of the absence of good cause for the late filing, is made explicit; LBP-05-16, 62 NRC 56 (2005)
IRREPARABLE INJURY
litigation expense, even substantial and unrecoupable cost, does not meet the stay requirement; CLI-05-27, 62 NRC 715 (2005)
Staff's process-driven concern that it will have to review its files to consider whether documents meet the PAPO board's test for circulated drafts does not come close to meeting the stay requirement in a legally meaningful sense; CLI-05-27, 62 NRC 715 (2005)
LAW OF THE CASE
an adjudicative body should, in a proper exercise of discretion, refrain from applying the doctrine where changed circumstances or public interest factors dictate; LBP-05-17, 62 NRC 77 (2005); LBP-05-26, 62 NRC 446 (2005)
changed circumstances include situations where intervening controlling authority makes reconsideration appropriate or substantially different evidence is adduced at a subsequent stage of the proceeding; LBP-05-17, 62 NRC 77 (2005); LBP-05-26, 62 NRC 446 (2005)
the decision of an appellate tribunal should ordinarily be followed in all subsequent phases of that case, provided that the particular question in issue was actually decided or decided by necessary implication; LBP-05-17, 62 NRC 77 (2005); LBP-05-26, 62 NRC 446 (2005)
this doctrine should not be applied woodenly in a way inconsistent with substantial justice; LBP-05-17, 62 NRC 77 (2005)
this doctrine, which is designed to promote repose and judicial economy, does not limit a tribunal's power; LBP-05-26, 62 NRC 446 (2005)

SUBJECT INDEX

LICENSE APPLICATIONS
contentions must show that a genuine dispute exists with regard to the application, challenge and identify either specific portions of, or alleged omissions from, the application, and provide the supporting reasons for each dispute; LBP-05-28, 62 NRC 585 (2005)
merely because there is a continuity of certain ''information'' between the draft and the final application does not render the draft ''reliance'' category documentary material; LBP-05-27, 62 NRC 478 (2005)
LICENSE CONDITIONS
a request to require applicant to review and adjust its decommissioning cost estimates on an annual basis improperly seeks a stricter requirement than that mandated by Commission regulations; LBP-05-22, 62 NRC 328 (2005)
compliance with financial assurance requirements can be established through use of; LBP-05-23, 62 NRC 373 (2005)
statements and commitments made by an ISFSI applicant under oath and/or on the record during a hearing process need not be memorialized as; LBP-05-21, 62 NRC 248 (2005)
there is no need to address the sufficiency of proposed conditions when a board has substantively rejected the merits of the underlying arguments for; LBP-05-22, 62 NRC 328 (2005)
LICENSE RENEWAL APPLICATIONS
information provided by an applicant must be complete and accurate in all material respects; DD-05-6, 62 NRC 862 (2005)
LICENSE RENEWAL PROCEEDINGS
apart from NRC policy of encouraging settlements is an equally important policy supporting prompt decisionmaking, which carries added weight in; CLI-05-24, 62 NRC 551 (2005)
emergency planning issues are excluded to limit the scope of these proceedings to age-related degradation unique to license renewal; CLI-05-24, 62 NRC 551 (2005); LBP-05-31, 62 NRC 735 (2005)
environmental impacts of terrorism are insufficiently related to the effects of plant aging to be material; LBP-05-31, 62 NRC 735 (2005)
for the Commission to grant an exemption or waiver of section 50.47(a)(1), and thereby permit the adjudication of emergency-planning issues in a license renewal proceeding, four conditions must be met; CLI-05-24, 62 NRC 551 (2005)
Part 50 regulations are aimed, directly or indirectly, at protecting public health and safety, but that does not mean that they are all suitable subjects for litigation; CLI-05-24, 62 NRC 551 (2005)
proximity to a nuclear power facility located in an adjoining state does not constitute the ''unique circumstances'' that will satisfy the third requirement for an exemption from the bar against challenging regulations in an adjudication; CLI-05-24, 62 NRC 551 (2005)
the Commission accepts certification of a question relating to an exemption from a regulation barring litigation of emergency planning issues; CLI-05-18, 62 NRC 185 (2005)
the fact that a petitioner's participation will broaden the issues and delay the proceeding receives relatively less weight in a proceeding brought over a decade before the expiration of the first of the existing licenses; LBP-05-16, 62 NRC 56 (2005)
LICENSE TRANSFER PROCEEDINGS
in ruling on claims of proximity standing, the Commission determines the radius beyond which it believes there is no longer an obvious potential for offsite consequences by taking into account the nature of the proposed action and the significance of the radioactive source; CLI-05-25, 62 NRC 572 (2005)
to obtain standing, intervention petitioners must demonstrate that a proposed license transfer would injure their financial, property, or other interests; CLI-05-25, 62 NRC 572 (2005); CLI-05-26, 62 NRC 577 (2005)
LICENSE TRANSFERS
when no change in either operating or possession authority is contemplated, there is no direct license transfer; CLI-05-25, 62 NRC 572 (2005)
when the ultimate parent company already controls the licensee indirectly and the current parent company will survive the merger and therefore will continue to control the licensee and (indirectly) the license, there is no indirect license transfer; CLI-05-25, 62 NRC 572 (2005)
LICENSEE CHARACTER
the Commission has long declined to assume that licensees will refuse to meet their obligations under their licenses and NRC regulations; LBP-05-17, 62 NRC 77 (2005)

SUBJECT INDEX

LICENSES
after the licensing board has issued a decision, it is up to the Commission to determine whether to authorize the NRC Staff to issue the requested license; LBP-05-29, 62 NRC 635 (2005)
LICENSING BOARD DECISIONS
absent a showing that the board's fact-specific rulings were clearly erroneous, the Commission generally defers to the board on matters of factual findings; CLI-05-16, 62 NRC 1 (2005)
the Commission customarily vacates a board decision when its appellate review is cut short by mootness; CLI-05-22, 62 NRC 542 (2005)
unreviewed decisions do not create binding legal precedent; CLI-05-22, 62 NRC 542 (2005)
LICENSING BOARDS
a board's role is to ensure that the agency has taken the requisite ''hard look'' at the potential environmental effects of the proposed action and its reasonable alternatives; LBP-05-19, 62 NRC 134 (2005)
all possible views and facts relating in any way to the matters in question need not be placed in the evidentiary record; CLI-05-17, 62 NRC 5 (2005)
applying a less stringent ''sufficiency'' standard when examining uncontested issues merely recognizes the inherent limitations on a board's review of a matter not in contest and therefore not subject to the more intense scrutiny afforded by the adversarial process; CLI-05-17, 62 NRC 5 (2005)
at the contention admission stage, the information, facts, and expert opinions provided by the petitioner will be examined by the board to confirm that they do indeed indicate the existence of adequate support for the contention; LBP-05-28, 62 NRC 585 (2005)
boards should conduct a simple ''sufficiency'' review of uncontested AEA and NEPA issues, not a *de novo* review; CLI-05-17, 62 NRC 5 (2005)
determinations that licensing boards must make in uncontested proceedings are described; CLI-05-17, 62 NRC 5 (2005)
in a uranium enrichment facility construction permit proceeding, a board's duty to conduct, at this stage of the proceeding, the weighing specified in section 51.105(a)(3) is beyond question; CLI-05-17, 62 NRC 5 (2005)
in deciding summary disposition motions, a board's function is to determine whether genuine issues of material fact remain between the parties, not to substantively seek to resolve material factual issues that do exist; LBP-05-19, 62 NRC 134 (2005)
in early site permit cases, boards cannot perform cost-benefit weighing because an ESP is only a partial construction permit; CLI-05-17, 62 NRC 5 (2005)
intervenors and other parties have the fundamental right of fair treatment; LBP-05-29, 62 NRC 635 (2005)
issues that must be considered in hearings on contested applications are described; CLI-05-17, 62 NRC 5 (2005)
legal and policy issues must be decided expeditiously without sacrificing fairness; CLI-05-17, 62 NRC 5 (2005)
licensing boards conducting mandatory hearings on uncontested issues must take an independent ''hard look'' at NRC Staff safety and environmental findings, but must not replicate NRC Staff work; CLI-05-17, 62 NRC 5 (2005)
the regulatory requirement for boards to weigh benefits against costs cannot be altered absent a notice-and-comment rulemaking; CLI-05-17, 62 NRC 5 (2005)
use of a deferential review standard for uncontested issues supports the NRC policies of promptness and efficiency; CLI-05-17, 62 NRC 5 (2005)
whether or not an application is contested, the Commission's regulations give the board special responsibility for three baseline NEPA issues; CLI-05-17, 62 NRC 5 (2005)
LICENSING BOARDS, AUTHORITY
adequacy of the Staff's safety review is not relevant to the issue of whether a license application should be approved; LBP-05-21, 62 NRC 248 (2005)
boards have considerable flexibility regarding the actual procedure to be followed at mandatory hearings; CLI-05-17, 62 NRC 5 (2005)

by pressing the Staff to negotiate, a board improperly assumed a supervisory role of directing the Staff to use its time and resources in negotiations with a nonparty over a potential nonissue; CLI-05-24, 62 NRC 551 (2005)
in testing the adequacy of Staff's review, boards may ask clarifying questions of witnesses, order the record to be supplemented, reject the proposed action, or even deny the construction permit outright, and set conditions on the approval of the construction permit; CLI-05-17, 62 NRC 5 (2005)
NRC boards do not sit to flyspeck environmental documents or to add details or nuances; CLI-05-29, 62 NRC 801 (2005)
time consumed by applicant-Staff interaction in refining an application cannot necessarily be attributed to the adjudicatory process or to the board's oversight of that process, especially because boards have no supervisory power over the Staff's performance of its regulatory review activities; LBP-05-29, 62 NRC 635 (2005)
urging parties to conduct settlement negotiations, in a matter in which the board's jurisdiction might ultimately turn out to be lacking, does not contravene principles precluding licensing boards from attempting to direct the Staff in the performance of its nonadjudicatory regulatory functions; LBP-05-16, 62 NRC 56 (2005)
where requisite support for contentions is lacking, a board should not make assumptions of fact that favor the petitioner or supply information that is lacking; LBP-05-28, 62 NRC 585 (2005)
LICENSING BOARDS, JURISDICTION
a tribunal invariably has the jurisdictional power and duty to determine whether it has jurisdiction; LBP-05-16, 62 NRC 56 (2005)
antiterrorism concerns are expressly reserved to the Commission for consideration outside the adjudicatory process; LBP-05-29, 62 NRC 635 (2005)
it is not the board's role to determine the optimum method by which the nation should manage spent nuclear fuel, but rather to pass judgment on the safety and environmental challenges to an applicant's particular proposal; LBP-05-29, 62 NRC 635 (2005)
LICENSING PROCEEDINGS
deliberate terrorist-type attacks are not appropriate issues to be considered in licensing hearings; LBP-05-29, 62 NRC 635 (2005)
the scope of a proceeding is defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-05-28, 62 NRC 585 (2005)
LICENSING SUPPORT NETWORK
Appendix A of the Topical Guidelines in Regulatory Guide 3.69 is a non-exhaustive list of types of documents that may be included in the LSN; LBP-05-27, 62 NRC 478 (2005)
basic licensing documents are simply a subcategory of documentary material; LBP-05-27, 62 NRC 478 (2005)
Class 1 ''reliance'' documentary material is any information upon which a potential party intends to rely and/or cite in support of its position in the proceeding; LBP-05-27, 62 NRC 478 (2005)
should a draft document satisfy the five criteria in the definition of circulated draft, the draft document must be made available on the LSN if a decision is made not to finalize the draft document, or if a substantial period of time has passed with no further action on the draft document; LBP-05-27, 62 NRC 478 (2005)
MANAGEMENT CHARACTER AND COMPETENCE
contentions premised on a general fear that a licensee cannot be trusted to follow regulations of any kind are not allowed; LBP-05-28, 62 NRC 585 (2005)
management integrity challenges must assert and demonstrate that the personnel alleged to have acted improperly in the past are also going to be involved with the activity that is the subject of the current proceeding; LBP-05-28, 62 NRC 585 (2005)
mere reference to previous enforcement history, without establishing a link between the prior history and the contention at issue, is insufficient support; LBP-05-28, 62 NRC 585 (2005)
MANDATORY HEARINGS
an application is considered contested if there is a controversy between the Staff and the applicant concerning issuance of the license or any of its terms, or a petition for leave to intervene in opposition to an application has been granted or is pending before the Commission; CLI-05-17, 62 NRC 5 (2005)

contested and uncontested designations apply issue-by-issue, and not to proceedings-at-large; CLI-05-17, 62 NRC 5 (2005)
determinations that licensing boards must make in uncontested proceedings are described; CLI-05-17, 62 NRC 5 (2005)
historically, licensing boards have repeatedly distinguished between the contested and uncontested ‘‘ portion’’ of proceedings; CLI-05-17, 62 NRC 5 (2005)
issues to be addressed in both contested and uncontested proceedings are described; CLI-05-17, 62 NRC 5 (2005)
licensing boards conducting mandatory hearings on uncontested issues must take an independent ‘‘hard look’’ at NRC Staff safety and environmental findings, but must not replicate NRC Staff work; CLI-05-17, 62 NRC 5 (2005)
licensing boards generally should review contested and uncontested issues differently, giving the NRC Staff considerably more deference on uncontested issues; CLI-05-17, 62 NRC 5 (2005)
licensing boards have considerable flexibility regarding the actual procedure to be followed; CLI-05-17, 62 NRC 5 (2005)
licensing boards must expeditiously decide legal and policy issues without sacrificing fairness; CLI-05-17, 62 NRC 5 (2005)
licensing boards need not demand that all possible views and facts relating in any way to the matters in question must be placed in the evidentiary record; CLI-05-17, 62 NRC 5 (2005)
the Commission shall hold a hearing on each application for a construction permit for a utilization or production facility; CLI-05-17, 62 NRC 5 (2005)
the requirement that the Commission shall conduct a single adjudicatory hearing with regard to the licensing of construction and operation of a uranium enrichment facility resulted from Congress’s belief that separate hearings at both the construction permit and operating license stages constituted overjudicialization of the licensing process; CLI-05-17, 62 NRC 5 (2005)
use of a deferential review standard for uncontested issues supports the NRC policies of promptness and efficiency; CLI-05-17, 62 NRC 5 (2005)
whether or not an application is contested, the Commission’s regulations give the board special responsibility for three baseline NEPA issues; CLI-05-17, 62 NRC 5 (2005)
MATERIAL FALSE STATEMENTS
for a licensee statement to be treated as a false or inaccurate statement subject to NRC enforcement, the statement must be made to NRC and material to NRC; DD-05-8, 62 NRC 866 (2005)
MATERIAL MISREPRESENTATIONS
information provided by an applicant for a renewal license must be complete and accurate in all material respects; DD-05-6, 62 NRC 862 (2005)
MATERIALITY
for a contention to be admissible, it must be material to the findings the NRC must make to support the action that is involved in the proceeding; LBP-05-19, 62 NRC 134 (2005)
in the summary disposition context, a board looks into the substance of a contention to the degree necessary to make the determination whether a genuine dispute about a factual issue exists and whether that dispute is over a material fact; LBP-05-19, 62 NRC 134 (2005)
petitioner must demonstrate that the subject matter of a contention would impact the grant or denial of a pending license application; LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)
petitioner must show why the alleged error or omission is of possible consequence to the result of the proceeding; LBP-05-31, 62 NRC 735 (2005)
MATERIALS LICENSE AMENDMENT PROCEEDINGS
a presiding officer exercises sua sponte authority to reinstate a proceeding that was conditionally dismissed; LBP-05-25, 62 NRC 435 (2005)
general ‘‘areas of concern’’ are no longer sufficient to trigger a hearing; CLI-05-23, 62 NRC 546 (2005)
revised requirements for a tiered discovery process are intended to significantly reduce the delays and resources expended by all parties in discovery; CLI-05-23, 62 NRC 546 (2005)
revised rules call for hearings before either a three-judge board or an administrative law judge; CLI-05-23, 62 NRC 546 (2005)
MOOTNESS
a contention of omission becomes moot when the omission is cured; LBP-05-24, 62 NRC 429 (2005)

Commission reinstatement of a docket and direction that further adjudication be conducted by a licensing board rather than the presiding officer and special assistant is cause for dismissal of the presiding officer's proceeding; LBP-05-30, 62 NRC 733 (2005)
the Commission customarily vacates a board decision when its appellate review is cut short by; CLI-05-22, 62 NRC 542 (2005)
MOTIONS FOR RECONSIDERATION
a properly supported motion is one that does not rely upon entirely new theses or arguments, except to the extent it attempts to address a presiding officer's ruling that could not reasonably have been anticipated; LBP-05-23, 62 NRC 373 (2005)
a request to reexamine existing record material that may have been misunderstood or overlooked, or to clarify a matter that the party believes is unclear, is appropriate; LBP-05-23, 62 NRC 373 (2005)
late-filed motions require good cause as well as new information or changed circumstances; CLI-05-19, 62 NRC 403 (2005)
movant must identify errors or deficiencies in the presiding officer's determination indicating that the questioned ruling overlooked or misapprehended some legal principle or decision that should have controlling effect or some critical factual information; LBP-05-23, 62 NRC 373 (2005)
MOTIONS TO COMPEL
listing of a document on a privilege log is the occurrence or circumstance that triggers the 10-day period for the filing of a motion challenging the asserted privilege; LBP-05-33, 62 NRC 828 (2005)
parties cannot, without approval of the board, agree to extend or waive the 10-day filing rule; LBP-05-33, 62 NRC 828 (2005)
the requirement that motions be accompanied by a certification that the moving party has made a sincere effort to contact the other parties and resolve the issues does not extend the 10-day period for the filing of motion; LBP-05-33, 62 NRC 828 (2005)
MOTIONS TO REOPEN
the motion must be timely, address a significant safety or environmental issue, and demonstrate that a materially different result would be obtained had the evidence been considered; LBP-05-20, 62 NRC 187 (2005)
MOTIONS TO STRIKE
this is an appropriate mechanism for seeking the removal of information from a pleading or other submission that is irrelevant; LBP-05-20, 62 NRC 187 (2005)
MUNITIONS
NRC licenses do not address the warfare use of DU munitions, since NRC has no statutory authority to regulate such use; DD-05-8, 62 NRC 866 (2005)
proceeding involving decommissioning plan for cleanup of depleted uranium munitions is reinstated; LBP-05-25, 62 NRC 435 (2005)
pyrophoric characteristics, radiological hazard, and chemical toxicity of test-fired depleted uranium munitions are discussed; DD-05-8, 62 NRC 866 (2005)
NATIONAL ENVIRONMENTAL POLICY ACT
a board's finding of fact was not clearly erroneous where the board found that an alternative facility using a combination of technologies was not environmentally preferable to the proposed nuclear power plant; CLI-05-29, 62 NRC 801 (2005)
a cost-benefit comparison among the technological alternatives does not raise a material issue in an ESP proceeding; CLI-05-29, 62 NRC 801 (2005)
a licensing board's role is to ensure that the agency has taken the requisite ''hard look'' at the potential environmental effects of the proposed action and its reasonable alternatives; LBP-05-19, 62 NRC 134 (2005)
a reasonably close causal relationship between an alleged environmental effect and the alleged cause is required; CLI-05-28, 62 NRC 721 (2005)
a reviewing agency should take into account the applicant's goals for the project; CLI-05-29, 62 NRC 801 (2005)
agencies are not required to analyze impacts of alternatives that are speculate, remote, impractical, or not viable; CLI-05-28, 62 NRC 721 (2005)

SUBJECT INDEX

alleged errors or discrepancies in underlying data for a privately sponsored project should not be subjected to a stricter test than the ''not so distorted as to impair fair consideration'' test for a federally owned project; LBP-05-19, 62 NRC 134 (2005)
although an agency may coordinate and, where practicable, integrate its NEPA and NHPA review efforts, the two statutes impose separate and distinct obligations, and there is no requirement to complete the NHPA review in order to satisfy the obligations imposed by NEPA; LBP-05-26, 62 NRC 446 (2005)
although the Staff may rely on the environmental report in preparation of its environmental impact statement, it must also independently evaluate and be responsible for the reliability of all information used in the draft EIS; LBP-05-19, 62 NRC 134 (2005)
an agency must reasonably consider the historic and cultural resources in an affected area, assess the impact of the proposed action and reasonable alternatives to that action on cultural resources, disseminate the relevant facts and assessments for public comment, and respond to legitimate concerns; LBP-05-26, 62 NRC 446 (2005)
an applicant for an early site permit is permitted to rely upon Table S-3 to evaluate the effects of the uranium fuel cycle, and the Waste Confidence Rule for its findings regarding waste disposal; LBP-05-19, 62 NRC 134 (2005)
an environmental analysis often must rely upon imprecise and uncertain data, particularly when forecasting future markets and technologies, and such forecasts provide no absolute answers and must be judged on their reasonableness; LBP-05-19, 62 NRC 134 (2005)
an environmental report for an early site permit need not include an assessment of the benefits; LBP-05-19, 62 NRC 134 (2005)
an ESP applicant must file an environmental report with its application; LBP-05-19, 62 NRC 134 (2005)
applying a less stringent ''sufficiency'' standard when examining uncontested issues merely recognizes the inherent limitations on a board's review of a matter not in contest and therefore not subject to the more intense scrutiny afforded by the adversarial process; CLI-05-17, 62 NRC 5 (2005)
at the ESP stage of the construction permit process, the boards' ''reasonable alternatives'' responsibilities are limited because the proceeding is focused on an appropriate site, not the actual construction of a reactor; CLI-05-17, 62 NRC 5 (2005)
boards must independently consider the final balance among conflicting factors contained in the record of the proceeding; CLI-05-17, 62 NRC 5 (2005)
boards should conduct a simple ''sufficiency'' review of uncontested AEA and NEPA issues, not a *de novo* review; CLI-05-17, 62 NRC 5 (2005)
CEQ regulations are not binding on the NRC because the agency has not expressly adopted them, but they have been considered and relevant concepts adopted by the NRC through its own Part 51 regulations; LBP-05-19, 62 NRC 134 (2005)
challenges that question the NEPA analysis performed in a relicensing proceeding to develop a generic environmental impact analysis constitute an impermissible attack on agency regulations; LBP-05-31, 62 NRC 735 (2005)
contentions based on applicant's environmental report may be amended or new contentions may be filed if there are data or conclusions in the NRC draft or final environmental impact statement that differ significantly from the data or conclusions in the applicant's documents; CLI-05-20, 62 NRC 523 (2005)
contested and uncontested designations apply issue-by-issue, and not to proceedings-at-large; CLI-05-17, 62 NRC 5 (2005)
determination of economic benefits and costs that are tangential to environmental consequences are within a wide area of agency discretion; CLI-05-28, 62 NRC 721 (2005)
determinations that licensing boards must make in uncontested proceedings are described; CLI-05-17, 62 NRC 5 (2005)
early site permit applicants are not prohibited from including a cost-benefit analysis but it would still be subject to revision at the combined license stage to reflect changes in technology and economic factors; CLI-05-29, 62 NRC 801 (2005)
energy conservation or efficiency is not a reasonable alternative that would advance the goals of the license applicant's project to generate electricity to sell; CLI-05-29, 62 NRC 801 (2005)
environmental analyses are subject to a rule of reason which teaches that an environmental impact statement need only discuss the significant aspects of the probable environmental impact of the proposed agency action; LBP-05-19, 62 NRC 134 (2005)

environmental impact statements typically incorporate by reference other analyses and data by citing to the material and describing its content; CLI-05-28, 62 NRC 721 (2005)
federal agencies take a ''hard look'' at the environmental impacts of a proposed major federal action, and at alternatives to that action; LBP-05-19, 62 NRC 134 (2005)
financial estimates related to the ''cost'' of power are not the same costs that are required to be analyzed at the early site permit application stage; LBP-05-19, 62 NRC 134 (2005)
in a uranium enrichment facility construction permit proceeding, a board's duty to conduct, at *this* stage of the proceeding, the weighing specified in section 51.105(a)(3) is beyond question; CLI-05-17, 62 NRC 5 (2005)
in environmental analysis, NEPA calls for an estimate of anticipated, not unduly speculative, impacts rather than certainty or precision; CLI-05-20, 62 NRC 523 (2005)
in its environmental report, applicant is required to provide a discussion of alternatives to the proposed action that is sufficiently complete to aid the Commission in developing and exploring appropriate alternatives to the recommended course of action; LBP-05-31, 62 NRC 735 (2005)
in seeking to pose an admissible challenge to the ER or EIS discussion of alternatives, the burden is upon intervenors to propose reasonable alternatives by which the project's ends could be achieved; LBP-05-19, 62 NRC 134 (2005)
intervenors must show that any claimed mistake in an environmental impact statement is significant and material; CLI-05-29, 62 NRC 801 (2005)
issues that licensing boards must consider in hearings on contested applications are described; CLI-05-17, 62 NRC 5 (2005)
licensing boards conducting mandatory hearings on uncontested issues must take an independent ''hard look'' at NRC Staff safety and environmental findings, but must not replicate NRC Staff work; CLI-05-17, 62 NRC 5 (2005)
licensing boards generally should review contested and uncontested issues differently, giving the NRC Staff considerably more deference on uncontested issues; CLI-05-17, 62 NRC 5 (2005)
licensing boards in early site permit cases cannot perform cost-benefit weighing because an ESP is only a partial construction permit; CLI-05-17, 62 NRC 5 (2005)
licensing boards must expeditiously decide legal and policy issues without sacrificing fairness; CLI-05-17, 62 NRC 5 (2005)
NRC is not required to select any particular options, but simply prescribes the necessary process; LBP-05-19, 62 NRC 134 (2005)
NRC need not consider alternative ways to achieve a general goal, but should, instead, focus upon evaluating the alternative means by which a particular applicant reaches its goals; LBP-05-19, 62 NRC 134 (2005)
NRC regulations expressly prohibit *de novo* board review of uncontested AEA issues, but do not apply the bar to NEPA issues; CLI-05-17, 62 NRC 5 (2005)
NRC regulations require that an environmental report describe the environment affected by a proposed project; LBP-05-28, 62 NRC 585 (2005)
only a brief discussion of why an option was eliminated from further consideration is required; CLI-05-28, 62 NRC 721 (2005)
only alternatives reasonably related to the goals of the proposed action as well as the no-action alternative need to be considered in applicant's environmental report; LBP-05-28, 62 NRC 585 (2005)
separate analyses of alternatives that would have substantially similar consequences are not required; CLI-05-28, 62 NRC 721 (2005)
some sort of a weighing of the environmental costs against the economic, technical, or other public benefits of a proposal is called for in a uranium enrichment facility construction permit proceeding; CLI-05-17, 62 NRC 5 (2005)
Staff must consider the potential environmental effects of any proposed major federal action significantly affecting the quality of the human environment; LBP-05-19, 62 NRC 134 (2005)
the baseline questions in an early site permit proceeding are whether the NEPA process has been complied with, what is the appropriate final balance among conflicting factors, and whether the construction permit should be issued, denied, or appropriately conditioned; CLI-05-17, 62 NRC 5 (2005)

the NEPA review process does not extend to all conceivable consequences of agency decisions, no matter how far down the causal chain from a licensing decision and no matter how unpredictable; CLI-05-28, 62 NRC 721 (2005)
the test in considering challenges to the accuracy of economic assumptions underlying the analysis of a federally owned project is whether the economic considerations were so distorted as to impair fair consideration of those environmental consequences; LBP-05-19, 62 NRC 134 (2005)
to litigate a NEPA claim that the Staff failed to take a ''hard look'' at a significant environmental question, an intervenor must allege with adequate support that the Staff unduly ignored or minimized pertinent environmental effects; LBP-05-26, 62 NRC 446 (2005)
use of a deferential review standard for uncontested issues supports the NRC policies of promptness and efficiency; CLI-05-17, 62 NRC 5 (2005)
where a federal agency is not the sponsor of the project, the federal government's consideration of alternatives may accord substantial weight to the preferences of the applicant in the design of the project; LBP-05-19, 62 NRC 134 (2005)
where applicant has no business connection to the end users of its electricity and therefore no ability to implement demand-side management, demand-side management is not a reasonable alternative; LBP-05-19, 62 NRC 134 (2005)
whether or not an application is contested, the Commission's regulations give the board special responsibility for three baseline NEPA issues; CLI-05-17, 62 NRC 5 (2005)
NATIONAL HISTORIC PRESERVATION ACT
agencies must inform interested persons and entities of the possible governmental action, and consult with them to identify historic properties, assess the potential effects of the proposed action on these properties, and seek ways to avoid, minimize, or mitigate any adverse impact on the properties; LBP-05-28, 62 NRC 585 (2005)
although an agency may coordinate and, where practicable, integrate its NEPA and NHPA review efforts, the two statutes impose separate and distinct obligations, and there is no requirement to complete the NHPA review in order to satisfy the obligations imposed by NEPA; LBP-05-26, 62 NRC 446 (2005)
in civil proceedings, an administrative official is permitted to draw a reasonable inference from the silence of one who is called upon to speak; LBP-05-26, 62 NRC 446 (2005)
insensitivity to a tribal group does not, standing alone, violate the NHPA; LBP-05-26, 62 NRC 446 (2005)
that the NHPA regulations in effect in January 1998 permitted phased compliance with section 106 is a conclusion that is consistent with statute, regulations, case law, and administrative practice; LBP-05-26, 62 NRC 446 (2005)
the Advisory Council on Historic Preservation intended the regulatory revisions of January 2001 to be applied prospectively; LBP-05-26, 62 NRC 446 (2005)
this procedural statute is designed to ensure consideration by federal agencies of the potential impact of their undertakings, including licensing decisions, upon historic properties; LBP-05-28, 62 NRC 585 (2005)
this statute is directed to federal agencies such as the NRC, not to license applicants; LBP-05-28, 62 NRC 585 (2005)
NATIONAL SECURITY INFORMATION
NRC's assessments of boiling water reactor structural vulnerabilities, including both the methodology employed and the results, are classified; DD-05-4, 62 NRC 782 (2005)
NATIVE AMERICANS
insensitivity to a tribal group does not, standing alone, violate the National Historic Preservation Act; LBP-05-26, 62 NRC 446 (2005)
NOTICE OF HEARING
arguments relating to good cause for late filing about the insufficiencies of constructive notice are inconsequential in light of the adoption of a legislative resolution demonstrating that the petitioner county government had actual notice of the proposed license renewals at a relatively early date; LBP-05-16, 62 NRC 56 (2005)
Federal Register publication of an NRC notice of hearing opportunity is legally adequate notice; CLI-05-24, 62 NRC 551 (2005)

the regulatory requirement for boards to weigh benefits against costs cannot be altered absent a notice-and-comment rulemaking; CLI-05-17, 62 NRC 5 (2005)
NRC INSPECTION
other methods are available to inspectors to obtain design basis information from a licensee, rendering a Demand for Information unnecessary for the purposes of the inspection; DD-05-2, 62 NRC 389 (2005)
NRC POLICY
apart from NRC policy of encouraging settlements is an equally important policy supporting prompt decisionmaking, which carries added weight in license renewal proceedings; CLI-05-24, 62 NRC 551 (2005)
licensing boards must expeditiously decide legal and policy issues without sacrificing fairness; CLI-05-17, 62 NRC 5 (2005)
longstanding policy favors settlement by parties to an adjudication; CLI-05-24, 62 NRC 551 (2005)
the Commission encourages the fair and reasonable settlement and resolution of issues; LBP-05-18, 62 NRC 126 (2005)
the NRC adjudicatory process is not the proper venue for the evaluation of a petitioner's personal view regarding the direction regulatory policy should take; LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)
See also Defense-in-Depth Policy
NRC REVIEW
this process, including requests for additional information, helps an applicant to enhance its proposal from a safety standpoint; LBP-05-29, 62 NRC 635 (2005)
NRC STAFF
by pressing the Staff to negotiate, a board improperly assumed a supervisory role of directing the Staff to use its time and resources in negotiations with a nonparty over a potential nonissue; CLI-05-24, 62 NRC 551 (2005)
in Subpart L proceedings, Staff is subject to mandatory disclosure obligations to file and update the hearing file and to disclose and/or provide certain additional documents; LBP-05-33, 62 NRC 828 (2005)
time consumed by applicant-Staff interaction in refining an application cannot necessarily be attributed to the adjudicatory process or to the board's oversight of that process, especially because boards have no supervisory power over the Staff's performance of its regulatory review activities; LBP-05-29, 62 NRC 635 (2005)
urging parties to conduct settlement negotiations, in a matter in which the board's jurisdiction might ultimately turn out to be lacking, does not contravene principles precluding licensing boards from attempting to direct the Staff in the performance of its nonadjudicatory regulatory functions; LBP-05-16, 62 NRC 56 (2005)
NRC STAFF REVIEW
adequacy of the safety review is not relevant to the issue of whether a license application should be approved
adequacy of the Staff's safety review is not relevant to the issue of whether a license application should be approved; LBP-05-20, 62 NRC 187 (2005); LBP-05-21, 62 NRC 248 (2005)
although an agency may coordinate and, where practicable, integrate its NEPA and NHPA review efforts, the two statutes impose separate and distinct obligations, and there is no requirement to complete the NHPA review in order to satisfy the obligations imposed by NEPA; LBP-05-26, 62 NRC 446 (2005)
an agency official ''should be sensitive to the special concerns of Indian tribes in historic preservation issues; LBP-05-26, 62 NRC 446 (2005)
boards subject the Staff's evidence to the same scrutiny as that of the other parties; LBP-05-29, 62 NRC 635 (2005)
in civil proceedings, an administrative official is permitted to draw a reasonable inference from the silence of one who is called upon to speak; LBP-05-26, 62 NRC 446 (2005)
potential environmental effects of any proposed major federal action significantly affecting the quality of the human environment must be considered; LBP-05-19, 62 NRC 134 (2005)
the issue for decision is not whether the Staff performed well, but whether the license application raises health and safety concerns; LBP-05-21, 62 NRC 248 (2005)

to litigate a NEPA claim that the Staff failed to take a ''hard look'' at a significant environmental question, an intervenor must allege with adequate support that the Staff unduly ignored or minimized pertinent environmental effects; LBP-05-26, 62 NRC 446 (2005)
NUCLEAR REGULATORY COMMISSION, AUTHORITY
after the licensing board has issued a decision, it is up to the Commission to determine whether to authorize the NRC Staff to issue the requested license; LBP-05-29, 62 NRC 635 (2005)
NRC may issue a case-specific order overriding a procedural regulation; CLI-05-17, 62 NRC 5 (2005)
protection of safeguards information, where warranted, is absolute; CLI-05-22, 62 NRC 542 (2005)
rules of procedure may be customized by the Commission for a particular case as long as there is adequate notice and no prejudice; CLI-05-23, 62 NRC 546 (2005)
the Commission may choose to exercise its supervisory authority over the Staff to direct the Staff to interact with a governmental petitioner in a manner that would moot the adjudication; LBP-05-16, 62 NRC 56 (2005)
the regulatory review process, including requests for additional information, helps an applicant to enhance its proposal from a safety standpoint; LBP-05-29, 62 NRC 635 (2005)
NUCLEAR REGULATORY COMMISSION, JURISDICTION
NRC licenses do not address the warfare use of DU munitions, since NRC has no statutory authority to regulate such use; DD-05-8, 62 NRC 866 (2005)
OPERATING LICENSE AMENDMENT PROCEEDINGS
a board must identify the specific hearing procedures to be used on a contention-by-contention basis; LBP-05-32, 62 NRC 813 (2005)
a facility's compliance with its current licensing basis is not within the scope of a license amendment proceeding, but the ability of the facility, in its unchanged current physical condition, to perform satisfactorily at the requested increased power plant level, is litigable; LBP-05-32, 62 NRC 813 (2005)
OPPORTUNITY FOR HEARING
no ''proceeding'' exists for which the Commission can publish a notice of opportunity for hearing or in which a petitioner can seek intervention and a hearing if a proposed merger leaves control of the licensee unchanged; CLI-05-25, 62 NRC 572 (2005)
ORDERS
NRC may issue a case-specific order overriding a procedural regulation; CLI-05-17, 62 NRC 5 (2005)
PARTIES
although Staff's regulatory review plays an important role in the application and hearing process, boards treat Staff, with whom boards have no extrajudicial organizational interaction, the same as any other party at the hearing; LBP-05-29, 62 NRC 635 (2005)
PLEADINGS
an intervenor must submit a written presentation that describes in detail any deficiency or omission in the license application, with a detailed statement of reasons why any particular section or portion is deficient; LBP-05-17, 62 NRC 77 (2005)
arguments that an intervenor fails to raise or develop in its written presentation will be treated as waived; LBP-05-17, 62 NRC 77 (2005)
government entities seeking to litigate their own contentions are held to the same pleading rules as everyone else; CLI-05-24, 62 NRC 551 (2005)
intervenors cannot seek to cure deficiencies of earlier pleadings by later introducing wholly new issues that could have been raised previously; CLI-05-20, 62 NRC 523 (2005)
nongovernmental prospective intervenors may be held to a higher standard for contention pleading than governmental entities in order to ensure that they have made a serious commitment to the process, have come forward with a specific focus, and are capable of making a knowledgeable contribution on real issues; LBP-05-16, 62 NRC 56 (2005)
the contention pleading rule helps to ensure that full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions; LBP-05-16, 62 NRC 56 (2005)
POLICY
determining the wisest course of action for the country in terms of managing spent nuclear fuel borders on a policy choice about competing societal values, to be resolved by elected and appointed representatives; LBP-05-29, 62 NRC 635 (2005)

See also Defense-in-Depth Policy; NRC Policy; Prompt Decisionmaking Policy
PRECEDENTIAL EFFECT
unreviewed licensing board decisions do not create binding legal precedent; CLI-05-22, 62 NRC 542 (2005)
PRESIDING OFFICER, AUTHORITY
a materials license amendment proceeding that was conditionally dismissed is reinstated; LBP-05-25, 62 NRC 435 (2005)
withdrawal of an application after the issuance of a notice of hearing shall be on such terms as the presiding officer may prescribe; CLI-05-23, 62 NRC 546 (2005)
PRICE-ANDERSON ACT
the original version of the mandatory hearing requirement was applicable to all Atomic Energy Commission licensing applications; CLI-05-17, 62 NRC 5 (2005)
PRIVILEGE
See Deliberative Process Privilege
PRIVILEGE LOG
if sufficient information is lacking, the 10 days for filing motions to compel will be consumed by requesting basic substantiation of the privilege claim, rather than resolving the dispute; LBP-05-33, 62 NRC 828 (2005)
listing a document, identifying its date, author, addressee, and subject matter, and labeling it as ''deliberative process privileged'' does not provide sufficient information for assessing the claim of privilege; LBP-05-33, 62 NRC 828 (2005)
the requirement that the privilege claimant provide, without further order or request, sufficient information for assessing the claim of privilege, is closely related to the 10-day requirement for filing motions to compel; LBP-05-33, 62 NRC 828 (2005)
PRO SE LITIGANTS
a board may overlook procedural defects in pleadings rather than risk overlooking any significant fact based solely on the litigant's lack of familiarity with the NRC Rules of Practice and Procedure; LBP-05-28, 62 NRC 585 (2005)
PROBABILISTIC RISK ASSESSMENT
if the consequences of an accident are shown to be insignificant, no attention needs to be paid to the actual probability of that accident; LBP-05-29, 62 NRC 635 (2005)
PROMPT DECISIONMAKING POLICY
apart from NRC policy of encouraging settlements is an equally important policy supporting prompt decisionmaking, which carries added weight in license renewal proceedings; CLI-05-24, 62 NRC 551 (2005)
PROOF
See Burden of Proof
PROPERTY INSURANCE
licensees of ISFSIs are not required to obtain onsite property insurance; LBP-05-21, 62 NRC 248 (2005)
See also Insurance
PUBLIC INTEREST
there is no balancing of the government's duty to protect safeguards information against the public interest in disclosure; CLI-05-22, 62 NRC 542 (2005)
QUALIFICATIONS
a witness may be qualified through academic training or relevant experience, or a combination of both; LBP-05-22, 62 NRC 328 (2005)
RADIATION MONITORING SYSTEM
a settlement agreement allows for downgradient offsite monitoring of groundwater for tritium; LBP-05-18, 62 NRC 126 (2005)
RADIOACTIVE RELEASES
significant releases due to a terrorist attack on a spent fuel pool are very unlikely; DD-05-4, 62 NRC 782 (2005)
the integrity of a spent fuel storage canister as a radiation boundary following an accidental aircraft crash impact is considered in an independent spent fuel storage installation licensing proceeding; LBP-05-29, 62 NRC 635 (2005)

REACTOR COOLING SYSTEMS
the potential for large loose parts to become a factor in the event of a large-break loss-of-coolant accident is discussed; DD-05-5, 62 NRC 791 (2005)
REACTOR OPERATION
whether licensee has adequately justified the structural integrity of the guide valves and the effect of loose parts, should they occur, on operation and shutdown of the reactor is discussed; DD-05-5, 62 NRC 791 (2005)
RECONSIDERATION
a ''clearly erroneous'' finding is one that is not even plausible in light of the record viewed in its entirety; CLI-05-19, 62 NRC 403 (2005)
motions must be based on elaboration or refinement of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification; CLI-05-19, 62 NRC 403 (2005)
the likelihood that a reviewing body will rely on the presumption of correctness of a trial court's factual determinations tends to increase when trial judges have lived with the controversy for weeks or months instead of just a few hours; CLI-05-19, 62 NRC 403 (2005)
the standard of ''clear error'' for overturning a board factual finding is quite high; CLI-05-19, 62 NRC 403 (2005)
See also Motions for Reconsideration
REFERRAL OF RULING
routine rulings on contention admissibility are usually not occasions for the Commission to exercise interlocutory review authority, particularly when a hearing on related matters is about to take place; CLI-05-21, 62 NRC 538 (2005)
REGULATIONS
a delayed effective date is evidence that cuts against retroactive application; LBP-05-26, 62 NRC 446 (2005)
challenge to an NRC regulation in an adjudicatory proceeding not permitted; LBP-05-22, 62 NRC 328 (2005)
if a new regulation is substantively inconsistent with a prior regulation or prior agency practice, it is retroactive as applied to pending claims; LBP-05-26, 62 NRC 446 (2005)
NRC may issue a case-specific order overriding a procedural regulation; CLI-05-17, 62 NRC 5 (2005)
with limited exceptions, no rule or regulation of the Commission is subject to attack in any NRC adjudicatory proceeding; LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)
See also Rules; Rules of Practice
REGULATIONS, INTERPRETATION
inquiry into whether a regulation operates retroactively demands a commonsense, functional judgment about whether the new provision attaches new legal consequences to events completed before its enactment; LBP-05-26, 62 NRC 446 (2005)
of ''contested'' and ''uncontested'' in 10 C.F.R. 2.104(b) and of ''contested proceeding'' in 10 C.F.R. 2.4; CLI-05-17, 62 NRC 5 (2005) 51.105(a)(4) and (5); CLI-05-17, 62 NRC 5 (2005)
of 10 C.F.R. 2.325; CLI-05-17, 62 NRC 5 (2005)
of 10 C.F.R. 2.786(b)(4)(i); CLI-05-16, 62 NRC 1 (2005)
of 10 C.F.R. 2.1207, 2.1209; CLI-05-17, 62 NRC 5 (2005)
of 10 C.F.R. 52.21; CLI-05-17, 62 NRC 5 (2005)
of 10 C.F.R. 51.105(a)(2); CLI-05-17, 62 NRC 5 (2005)
there is no mutually exclusive dichotomy between 10 C.F.R. 2.1003(a) ''documentary material'' and 10 C.F.R. 2.1003(b) ''basic licensing documents''; LBP-05-27, 62 NRC 478 (2005)
REGULATORY GUIDES
Appendix A of the Topical Guidelines in Regulatory Guide 3.69 is a non-exhaustive list of types of documents that may be included in the Licensing Support Network; LBP-05-27, 62 NRC 478 (2005)
NRC may determine the acceptability of other methods to meet regulatory requirements on a case-by-case basis; DD-05-2, 62 NRC 389 (2005)
REINSTATEMENT OF PROCEEDING
a presiding officer exercises sua sponte authority to reinstate a proceeding that was conditionally dismissed; LBP-05-25, 62 NRC 435 (2005)

REOPENING A RECORD
even though a matter is timely raised and involves significant safety considerations, no reopening of the evidentiary hearing will be required if the affidavits submitted in response to the motion demonstrate that there is no genuine unresolved issue of fact; LBP-05-20, 62 NRC 187 (2005)
potential for delay or expansion of proceeding weighs against accepting a petition that would reopen a closed administrative adjudicatory record; CLI-05-24, 62 NRC 551 (2005)
See also Motions To Reopen
REQUEST FOR ACTION
issues that can be addressed in ongoing licensing proceedings are not accepted for review under section 2.206; DD-05-2, 62 NRC 389 (2005)
the board finds no basis for treating section 2.206 petitions as a practical ''other means'' available for protecting petitioner's interests within the meaning of the fifth factor in the regulatory criteria for late-filed intervention petitions; LBP-05-16, 62 NRC 56 (2005)
REVIEW, INTERLOCUTORY
routine rulings on contention admissibility are usually not occasions for the Commission to exercise interlocutory review authority, particularly when a hearing on related matters is about to take place; CLI-05-21, 62 NRC 538 (2005)
See also Appeals; Appellate Review; Standard Of Review
RISK ANALYSIS
if the probability of an accident is sufficiently low, the consequences need not be examined, for even if they are assumed to be excessive, they need not be guarded against; LBP-05-29, 62 NRC 635 (2005)
See also Probabilistic Risk Assessment
RULE OF REASON
an environmental impact statement need only discuss the significant aspects of the probable environmental impact of the proposed agency action; LBP-05-19, 62 NRC 134 (2005)
RULEMAKING
a petitioner that fails to qualify for an exemption from the rule prohibiting challenges to NRC regulations may file a petition under section 2.802; CLI-05-24, 62 NRC 551 (2005)
congressional grant of rulemaking authority does not include the power to promulgate retroactive rules unless Congress expressly confers such power; LBP-05-26, 62 NRC 446 (2005)
the regulatory requirement for boards to weigh benefits against costs cannot be altered absent a notice-and-comment rulemaking; CLI-05-17, 62 NRC 5 (2005)
RULES
the Administrative Procedure Act defines ''rule'' as an agency statement of future effect; LBP-05-26, 62 NRC 446 (2005)
with limited exceptions, no rule or regulation of the Commission is subject to attack in any NRC adjudicatory proceeding; LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)
RULES OF PRACTICE
a board ruling that rests on testimony from experts and the board's own reasoning, which appears plausible, is not clearly erroneous; CLI-05-19, 62 NRC 403 (2005)
a brief explanation of the basis for a contention is a necessary prerequisite for its admission; LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)
a contention of omission becomes moot when the omission is cured; LBP-05-24, 62 NRC 429 (2005)
a facility's compliance with its current licensing basis is not within the scope of a license amendment proceeding, but the ability of the facility, in its unchanged current physical condition, to perform satisfactorily at the requested increased power plant level, is litigable; LBP-05-32, 62 NRC 813 (2005)
a generalized grievance shared in substantially equal measure by all or a large class of citizens will not result in a distinct and palpable harm sufficient to support standing; LBP-05-31, 62 NRC 735 (2005)
a governmental entity's overriding, paramount interest in, and responsibility for, emergency planning prevents that interest from being represented by existing parties; LBP-05-16, 62 NRC 56 (2005)
a justiciable controversy must involve adverse parties representing a true clash of interests; LBP-05-17, 62 NRC 77 (2005)
a motion for leave to file a new contention, filed within the 20-day time period previously set by the board, satisfies the requirement that such motions be filed in a timely fashion; LBP-05-32, 62 NRC 813 (2005)

SUBJECT INDEX

a motion to strike is an appropriate mechanism for seeking the removal of information from a pleading or other submission that is irrelevant; LBP-05-20, 62 NRC 187 (2005)
a nontimely filing will not be considered by a licensing board absent a showing that, based upon a balancing of eight factors, the request should be entertained; LBP-05-19, 62 NRC 134 (2005)
a presiding officer has the discretion to dismiss a contention for default where a sponsoring party does not pursue it at hearing; LBP-05-22, 62 NRC 328 (2005)
a properly supported reconsideration motion is one that does not rely upon entirely new theses or arguments, except to the extent it attempts to address a presiding officer's ruling that could not reasonably have been anticipated; LBP-05-23, 62 NRC 373 (2005)
a stay is not justified merely to preserve the status quo while an appeal is pending on a complex question; CLI-05-27, 62 NRC 715 (2005)
a ''sufficiency'' review of uncontested issues may prove suited to NRC Staff summaries of key safety and environmental findings, along with Staff witnesses prepared to answer board inquiries; CLI-05-17, 62 NRC 5 (2005)
a summary disposition motion will be granted upon a showing that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-05-19, 62 NRC 134 (2005); LBP-05-20, 62 NRC 187 (2005)
absent a showing that the board's fact-specific rulings were clearly erroneous, the Commission generally defers to the board on matters of factual findings; CLI-05-16, 62 NRC 1 (2005)
absent compelling reasons, the Commission adheres to the case or controversy doctrine in its adjudicatory proceedings; LBP-05-17, 62 NRC 77 (2005)
an adjudicative body should, in a proper exercise of discretion, refrain from applying the law of the case doctrine where changed circumstances or public interest factors dictate; LBP-05-17, 62 NRC 77 (2005); LBP-05-26, 62 NRC 446 (2005)
an allegation of a special interest in a proceeding, no matter how longstanding, without a showing of a particularized harm is insufficient to establish standing; LBP-05-31, 62 NRC 735 (2005)
an application is considered contested if there is a controversy between the Staff and the applicant concerning issuance of the license or any of its terms or a petition for leave to intervene in opposition to an application has been granted or is pending before the Commission; CLI-05-17, 62 NRC 5 (2005)
an entity that seeks to intervene on behalf of its members must show that it has an individual member who can fulfill all the necessary standing elements and who has authorized the organization to represent his or her interests; LBP-05-31, 62 NRC 735 (2005)
an inadequate privilege log is particularly problematic in Subpart L proceedings because no other discovery is allowed and the party filing the motion to compel is forced to shoot in the dark and face a substantive answer by the privilege claimant, without the right to reply; LBP-05-33, 62 NRC 828 (2005)
an intervenor must submit a written presentation that describes in detail any deficiency or omission in the license application, with a detailed statement of reasons why any particular section or portion is deficient; LBP-05-17, 62 NRC 77 (2005)
any contention that falls outside the specified scope of a proceeding must be rejected; LBP-05-31, 62 NRC 735 (2005)
applicant bears the ultimate burden of proof in a licensing proceeding; LBP-05-21, 62 NRC 248 (2005)
applying a less stringent ''sufficiency'' standard when examining uncontested issues merely recognizes the inherent limitations on a board's review of a matter not in contest and therefore not subject to the more intense scrutiny afforded by the adversarial process; CLI-05-17, 62 NRC 5 (2005)
arguments relating to good cause for late filing about the insufficiencies of constructive notice are inconsequential in light of the adoption of a legislative resolution demonstrating that the petitioner county government had actual notice of the proposed license renewals at a relatively early date; LBP-05-16, 62 NRC 56 (2005)
arguments that an intervenor fails to raise or develop in its written presentation will be treated as waived; LBP-05-17, 62 NRC 77 (2005)
automatic full-participation standing is conferred on governmental bodies if they have jurisdiction over the geographical area in which the reactor at issue is located; LBP-05-16, 62 NRC 56 (2005)
basic licensing documents are simply a subcategory of documentary material; LBP-05-27, 62 NRC 478 (2005)

because retroactivity is not favored in the law, statutes and regulations will not be construed to have retroactive effect unless their language requires this result; LBP-05-26, 62 NRC 446 (2005)
boards should conduct a simple ''sufficiency'' review of uncontested AEA and NEPA issues, not a *de novo* review; CLI-05-17, 62 NRC 5 (2005)
challenge to an NRC regulation in an adjudicatory proceeding is not permitted; LBP-05-22, 62 NRC 328 (2005); LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)
challenges that question the NEPA analysis performed in a relicensing proceeding to develop a generic environmental impact analysis constitute an impermissible attack on agency regulations; LBP-05-31, 62 NRC 735 (2005)
changed circumstances include a situation where, for example, intervening controlling authority makes reconsideration appropriate, or substantially different evidence is adduced at a subsequent stage of the proceeding; LBP-05-17, 62 NRC 77 (2005)
contentions based on applicant's environmental report may be amended or new contentions may be filed if there are data or conclusions in the NRC draft or final environmental impact statement that differ significantly from the data or conclusions in the applicant's documents; CLI-05-20, 62 NRC 523 (2005)
contentions challenging license applications must show that a genuine dispute exists with regard to the application, challenge and identify either specific portions of, or alleged omissions from, the application, and provide the supporting reasons for each dispute; LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)
contested and uncontested designations apply issue-by-issue, and not to proceedings-at-large; CLI-05-17, 62 NRC 5 (2005)
even though a matter is timely raised and involves significant safety considerations, no reopening of the evidentiary hearing will be required if the affidavits submitted in response to the motion demonstrate that there is no genuine unresolved issue of fact; LBP-05-20, 62 NRC 187 (2005)
failure to comply with any of the six pleading requirements is grounds for the dismissal of a contention; LBP-05-31, 62 NRC 735 (2005)
Federal Register publication of an NRC notice of hearing opportunity is legally adequate notice; CLI-05-24, 62 NRC 551 (2005)
for a contention to be admissible, it must assert an issue of law or fact that is material to the findings the NRC must make to support the action that is involved in the proceeding; LBP-05-19, 62 NRC 134 (2005); LBP-05-28, 62 NRC 585 (2005)
for the Commission to grant an exemption or waiver of section 50.47(a)(1), and thereby permit the adjudication of emergency-planning issues in a license renewal proceeding, four conditions must be met; CLI-05-24, 62 NRC 551 (2005)
given the parallel between motions for summary disposition and motions to reopen, it is appropriate to resolve a motion for summary disposition before considering a motion to reopen; LBP-05-20, 62 NRC 187 (2005)
hearing can refer to any of a number of events, including trial-type evidentiary hearings, paper hearings, paper hearings accompanied by oral arguments, hearings employing a mixture of procedural rules, and legislative hearings; CLI-05-17, 62 NRC 5 (2005)
historically, licensing boards have repeatedly distinguished between the contested and uncontested '' portions'' of proceedings; CLI-05-17, 62 NRC 5 (2005)
if a new contention is timely under section 2.309(f)(2)(iii), then it appears contradictory to rule that it must also satisfy the eight factors in section 2.309(c) for nontimely filings; LBP-05-32, 62 NRC 813 (2005)
if a petitioner cannot show good cause for its late filing, then its demonstration on the other factors must be compelling; CLI-05-24, 62 NRC 551 (2005)
if a witness's qualifications are challenged, the party offering that witness bears the burden of showing that the witness possesses sufficient expertise; LBP-05-21, 62 NRC 248 (2005); LBP-05-22, 62 NRC 328 (2005)
if uncontested issues prove relatively straightforward, a simple ''paper'' review may suffice; CLI-05-17, 62 NRC 5 (2005)
implementing regulations and issues to be addressed in both contested and uncontested proceedings are described; CLI-05-17, 62 NRC 5 (2005)

in addition to establishing standing, an intervention petitioner must also set forth at least one admissible contention; LBP-05-31, 62 NRC 735 (2005)
in addition to the general provisions for admissibility of nontimely contentions, there is an additional process for determining the admissibility of contentions based upon new information that is added to the record; LBP-05-19, 62 NRC 134 (2005)
in determining whether a ''concurrence process'' has occurred, boards look to objective factors such as whether the document is a significant, well-developed, mostly complete draft, the nature and extent of management review devoted to the document, and whether the management review was for the purpose of agreement on the substance of the draft; LBP-05-27, 62 NRC 478 (2005)
in Subpart L proceedings, Staff is subject to mandatory disclosure obligations to file and update the hearing file and to disclose and/or provide certain additional documents; LBP-05-33, 62 NRC 828 (2005)
in terms of whether it can reasonably be expected that a petitioner's participation would assist in developing a sound record, weaknesses in timing and content of an initial filing can be overcome by subsequent written filings, as well as by an oral demonstration of a sense of purpose and a commitment to participate and to contribute; LBP-05-16, 62 NRC 56 (2005)
in the summary disposition context, a board looks into the substance of a contention to the degree necessary to make the determination whether a genuine dispute about a factual issue exists and whether that dispute is over a material fact; LBP-05-19, 62 NRC 134 (2005)
information regarding the applicant's environmental report and the Staff's environmental review documents is relevant to the good-cause factor for admission of late-filed contentions; LBP-05-19, 62 NRC 134 (2005)
intervenors may not freely change the focus of admitted contentions at will as litigation progresses, but are bound by the terms of the contentions; CLI-05-20, 62 NRC 523 (2005)
issues that licensing boards must consider in hearings on contested applications are described; CLI-05-17, 62 NRC 5 (2005)
it is appropriate for the Commission to consider whether an exemption should be granted to allow the emergency planning concerns of an adjacent county in another state to be addressed in a license renewal; LBP-05-16, 62 NRC 56 (2005)
late-filed motions for reconsideration require good cause as well as new information or changed circumstances; CLI-05-19, 62 NRC 403 (2005)
law of the case doctrine guides a tribunal's discretion but it does not limit a tribunal's power; LBP-05-17, 62 NRC 77 (2005); LBP-05-26, 62 NRC 446 (2005)
licensing boards conducting mandatory hearings on uncontested issues must take an independent ''hard look'' at NRC Staff safety and environmental findings, but must not replicate NRC Staff work; CLI-05-17, 62 NRC 5 (2005)
licensing boards generally should review contested and uncontested issues differently, giving the NRC Staff considerably more deference on uncontested issues; CLI-05-17, 62 NRC 5 (2005)
licensing boards have considerable flexibility regarding the actual procedure to be followed at mandatory hearings; CLI-05-17, 62 NRC 5 (2005)
licensing boards must expeditiously decide legal and policy issues without sacrificing fairness; CLI-05-17, 62 NRC 5 (2005)
licensing boards need not demand that all possible views and facts relating in any way to the matters in question be placed in the evidentiary record; CLI-05-17, 62 NRC 5 (2005)
listing a document on a privilege log, identifying its date, author, addressee, and subject matter, and labeling it as ''deliberative process privileged'' does not provide sufficient information for assessing the claim of privilege; LBP-05-33, 62 NRC 828 (2005)
listing of a document on a privilege log is the occurrence or circumstance that triggers the 10-day period for the filing of a motion challenging the asserted privilege; LBP-05-33, 62 NRC 828 (2005)
lower-level deliberations are not, per se, not deliberative; LBP-05-33, 62 NRC 828 (2005)
mere reference to previous enforcement history, without establishing a link between the prior history and the contention at issue, is insufficient support; LBP-05-28, 62 NRC 585 (2005)
motions to reopen must be timely, address a significant safety or environmental issue, and demonstrate that a materially different result would be obtained had the evidence been considered; LBP-05-20, 62 NRC 187 (2005)

nongovernmental prospective intervenors may be held to a higher standard for contention pleading than governmental entities in order to ensure that they have made a serious commitment to the process, have come forward with a specific focus, and are capable of making a knowledgeable contribution on real issues; LBP-05-16, 62 NRC 56 (2005)
on highly technical, fact-intensive questions, where the affidavits or submissions of experts must be weighed, the Commission is generally disinclined to upset the findings and conclusions of a presiding officer; CLI-05-28, 62 NRC 721 (2005)
petitioner must demonstrate that the subject matter of a contention would impact the grant or denial of a pending license application; LBP-05-31, 62 NRC 735 (2005)
petitioner must provide some sort of minimal basis indicating the potential validity of the issue; LBP-05-31, 62 NRC 735 (2005)
potential for delay or expansion of a proceeding weighs against accepting a petition that would reopen a closed administrative adjudicatory record; CLI-05-24, 62 NRC 551 (2005)
problems inherent in the petitioner county government's efforts, under a new administration, to launch its participation in an unfamiliar forum governed by specialized rules do not establish good cause for its belatedness; LBP-05-16, 62 NRC 56 (2005)
proximity standing rests on the presumption that an accident associated with the nuclear facility could adversely affect the health and safety of people working, living, or regularly engaging in activities offsite but within a certain distance of that facility; CLI-05-25, 62 NRC 572 (2005)
questions raised must be presented in an adversary context and in a form historically viewed as capable of resolution through the judicial process; LBP-05-17, 62 NRC 77 (2005)
reconsideration motions must be based on elaboration or refinement of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification; CLI-05-19, 62 NRC 403 (2005)
revised rules must comply with the Administrative Procedure Act, and NRC must furnish an adequate explanation for the changes; CLI-05-23, 62 NRC 546 (2005)
rules on contention admissibility are strict by design; LBP-05-31, 62 NRC 735 (2005)
Staff's disclosure obligations in Subpart L proceedings are not limited to documents that are relevant to the admitted contentions and thus are broader than the disclosure obligations of other parties; LBP-05-33, 62 NRC 828 (2005)
summary disposition motions in NRC proceedings are held to the same standards by which the federal courts evaluate summary judgment motions; LBP-05-19, 62 NRC 134 (2005)
the board finds no basis for treating section 2.206 petitions as a practical ''other means'' available for protecting petitioner's interests within the meaning of the fifth factor in the regulatory criteria for late-filed intervention petitions; LBP-05-16, 62 NRC 56 (2005)
the burden is on the party challenging agency action to offer feasible alternatives; LBP-05-19, 62 NRC 134 (2005)
the Commission customarily vacates a board decision when its appellate review is cut short by mootness; CLI-05-22, 62 NRC 542 (2005)
the Commission does not consider bare, unsupported assertions in its adjudications; CLI-05-16, 62 NRC 1 (2005)
the Commission does not permit uninterested persons to intervene and play the role of ''private attorney general'' in NRC adjudications; CLI-05-26, 62 NRC 577 (2005)
the Commission may customize its procedural rules for a particular case so long as there is adequate notice and no prejudice; CLI-05-23, 62 NRC 546 (2005)
the Commission rejects arguments that are filed, without justification, for the first time on appeal; CLI-05-16, 62 NRC 1 (2005)
the Commission shall conduct a single adjudicatory hearing with regard to the licensing of construction and operation of a uranium enrichment facility; CLI-05-17, 62 NRC 5 (2005)
the Commission's customary practice is to accept board-certified questions; CLI-05-18, 62 NRC 185 (2005)
the fact that a petitioner's participation will broaden the issues and delay the proceeding receives relatively less weight in a license renewal proceeding brought over a decade before the expiration of the first of the existing licenses; LBP-05-16, 62 NRC 56 (2005)

the likelihood that a reviewing body will rely on the presumption of correctness of a trial court's factual determinations tends to increase when trial judges have lived with the controversy for weeks or months instead of just a few hours; CLI-05-19, 62 NRC 403 (2005)
the most important requirement for grant of a stay pending appeal is irreparable injury; CLI-05-27, 62 NRC 715 (2005)
the need for balancing all the relevant factors, regardless of the absence of good cause for the late filing, is made explicit; LBP-05-16, 62 NRC 56 (2005)
the opponent of a summary disposition motion must put forth specific facts showing that there is a genuine issue of material fact to be litigated; LBP-05-19, 62 NRC 134 (2005)
the presumption against retroactive application of new laws is an essential thread in the mantle of protection that the law affords the individual citizen; LBP-05-26, 62 NRC 446 (2005)
the proponent of a contention must provide a brief explanation of the basis for the contention; LBP-05-32, 62 NRC 813 (2005)
the proponent of a summary disposition motion bears the burden of showing that there is no genuine issue as to any material fact; LBP-05-19, 62 NRC 134 (2005)
the purpose of the contention rule is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-05-31, 62 NRC 735 (2005)
the reach of a contention necessarily hinges upon its terms coupled with its stated bases; LBP-05-19, 62 NRC 134 (2005)
the requirement that motions to compel be accompanied by a certification that the moving party has made a sincere effort to contact the other parties and resolve the issues does not extend the 10-day period for the filing of motions; LBP-05-33, 62 NRC 828 (2005)
the requirement that the privilege claimant provide, without further order or request, sufficient information for assessing the claim of privilege, is closely related to the 10-day requirement for filing motions to compel; LBP-05-33, 62 NRC 828 (2005)
the scope of the intervenors' participation in adjudications is limited to their admitted contentions; CLI-05-17, 62 NRC 5 (2005)
the standard of ''clear error'' for overturning a board factual finding is quite high; CLI-05-19, 62 NRC 403 (2005)
there is no bright-line rule for evaluating a witness's expert qualifications; LBP-05-22, 62 NRC 328 (2005)
to be admissible, contentions must satisfy six pleading requirements; LBP-05-28, 62 NRC 585 (2005); LBP-05-31, 62 NRC 735 (2005)
to demonstrate good cause, a petitioner must show not only why it could not have filed within the time specified in the notice of opportunity for hearing, but also that it filed as soon as possible thereafter; CLI-05-24, 62 NRC 551 (2005)
to obtain standing, intervention petitioners must demonstrate that a proposed license transfer would injure their financial, property, or other interests; CLI-05-26, 62 NRC 577 (2005)
to qualify for the deliberative process privilege, information be both predecisional and deliberative; LBP-05-33, 62 NRC 828 (2005)
under law of the case doctrine, the decision of an appellate tribunal should ordinarily be followed in all subsequent phases of that case, provided that the particular question in issue was actually decided or decided by necessary implication; LBP-05-17, 62 NRC 77 (2005); LBP-05-26, 62 NRC 446 (2005)
under the traditional test for standing, petitioner must demonstrate (among other things) that a proposed license transfer would injure his or her financial, property, or other interests; CLI-05-25, 62 NRC 572 (2005)
unreviewed licensing board decisions do not create binding legal precedent; CLI-05-22, 62 NRC 542 (2005)
use of a deferential review standard for uncontested issues supports the NRC policies of promptness and efficiency; CLI-05-17, 62 NRC 5 (2005)
when a contention of omission is dismissed as moot, intervenor may file new or amended contentions challenging the adequacy of the documents that cured the omission in the original contention; LBP-05-24, 62 NRC 429 (2005)
when considering admissibility of late-filed contentions, the good-cause factor is given the most weight; CLI-05-24, 62 NRC 551 (2005)

when, during the course of a proceeding, the parties no longer disagree about the appropriateness of a requested remedy, a licensing board should ordinarily refrain from adjudicating questions underlying whether that remedy should be granted; LBP-05-17, 62 NRC 77 (2005)
whether or not an application is contested, the Commission's regulations give the board special responsibility for three baseline NEPA issues; CLI-05-17, 62 NRC 5 (2005)
SAFEGUARDS INFORMATION
NRC has authority to protect safeguards information from unauthorized disclosure, and there is no balancing of the government's duty to protect safeguards information against the public interest in disclosure; CLI-05-22, 62 NRC 542 (2005)
public release of information concerning physical security of nuclear facilities, which could be exploited by an adversary, would be contrary to the NRC's efforts to ensure protection of the nation's nuclear infrastructure and to NRC's statutory duties; DD-05-4, 62 NRC 782 (2005)
SAFETY REVIEW
changes to a plant and its operating procedures subsequent to initial licensing are evaluated, providing an adequate basis for concluding that the plant continues to meet the licensing bases; DD-05-2, 62 NRC 389 (2005)
SCHEDULING
the adjudicatory process is not wholly within the board's management and control because a significant amount of time can be consumed by the interaction between an applicant and the NRC Staff, as the applicant polishes the application and its supporting data; LBP-05-29, 62 NRC 635 (2005)
SECURITY CLEARANCES
intervenor's clearances must be terminated at the conclusion of the proceeding; LBP-05-15, 62 NRC 53 (2005)
SERVICE OF DOCUMENTS
e-mail filings may be refused acceptance unless, within 2 days after the electronic filing, an original and two copies of these documents, in the format specified in section 2.304(b), are mailed to the Commission's Rulemakings and Adjudications Staff; LBP-05-28, 62 NRC 585 (2005)
SETTLEMENT AGREEMENTS
apart from NRC policy of encouraging settlements is an equally important policy supporting prompt decisionmaking, which carries added weight in license renewal proceedings; CLI-05-24, 62 NRC 551 (2005)
even where it appears that a tribunal may ultimately be found to lack jurisdiction over a matter, no principle precludes that tribunal, before addressing the jurisdictional question, from suggesting to the parties that they settle their grievances by way of discussions among themselves; LBP-05-16, 62 NRC 56 (2005)
the Commission encourages settlement by parties to an adjudication; CLI-05-24, 62 NRC 551 (2005); LBP-05-18, 62 NRC 126 (2005)
SETTLEMENT NEGOTIATIONS
a more collaborative approach may be in order where a state or local governmental body's interest lies in ensuring that the contemplated license activity is conducted with due regard for the public health and safety and for the preservation of environmental values; LBP-05-16, 62 NRC 56 (2005)
by pressing the Staff to negotiate, a board improperly assumed a supervisory role of directing the Staff to use its time and resources in negotiations with a nonparty over a potential nonissue; CLI-05-24, 62 NRC 551 (2005)
pendency of certification to the Commission, while halting any further action by the board on the pending contentions, does not preclude the parties from; LBP-05-16, 62 NRC 56 (2005)
until a board has addressed the threshold issues of standing and admissibility of contentions, a proceeding is too inchoate to call for aggressive board encouragement of; CLI-05-24, 62 NRC 551 (2005)
urging parties to conduct negotiations, in a matter in which the board's jurisdiction might ultimately turn out to be lacking, does not contravene principles precluding licensing boards from directing the Staff in the performance of its nonadjudicatory regulatory functions; LBP-05-16, 62 NRC 56 (2005)
use of simultaneous adjudication and negotiation has the effect of spurring the parties to settlement; CLI-05-24, 62 NRC 551 (2005)

SHUTDOWN
concern with the quality of the fire barriers is resolved by licensee's replacement of Hemyc in systems that are credited in the plant safe shutdown capability analysis; DD-05-7, 62 NRC 862 (2005)
whether licensee has adequately justified the structural integrity of the guide valves and the effect of loose parts, should they occur, on operation and shutdown of the reactor is discussed; DD-05-5, 62 NRC 791 (2005)
SPENT FUEL MANAGEMENT
determining the wisest course of action for the country borders on a policy choice about competing societal values, to be resolved by elected and appointed representatives; LBP-05-29, 62 NRC 635 (2005)
SPENT FUEL POOLS
significant releases of radioactivity due to a terrorist attack are very unlikely; DD-05-4, 62 NRC 782 (2005)
SPENT FUEL STORAGE
NRC issued new security requirements for both spent fuel pools and dry casks after September 11, 2001, and continues to inspect each facility's performance to verify effective implementation of the associated security programs and mitigating strategies; DD-05-4, 62 NRC 782 (2005)
SPENT FUEL STORAGE CASKS
the integrity of a spent fuel storage canister as a radiation boundary following an accidental aircraft crash impact is considered in an independent spent fuel storage installation licensing proceeding; LBP-05-29, 62 NRC 635 (2005)
there was no clear error of fact or other basis for Commission review of a board's decision to use experimental data to calculate how the stainless steel multipurpose storage canister would hold up in an aircraft crash, or its rejection of a DOE Standard formulated for dissimilar situations; CLI-05-19, 62 NRC 403 (2005)
STANDARD OF REVIEW
a board ruling that rests on testimony from experts and the board's own reasoning, which appeared plausible, is not clearly erroneous; CLI-05-19, 62 NRC 403 (2005)
applying a less stringent ''sufficiency'' standard when examining uncontested issues merely recognizes the inherent limitations on a board's review of a matter not in contest and therefore not subject to the more intense scrutiny afforded by the adversarial process; CLI-05-17, 62 NRC 5 (2005)
boards should conduct a simple ''sufficiency'' review of uncontested AEA and NEPA issues, not a *de novo* review; CLI-05-17, 62 NRC 5 (2005)
in testing the adequacy of Staff's review, boards may ask clarifying questions of witnesses, order the record to be supplemented, reject the proposed action, or even deny the construction permit outright, and set conditions on the approval of the construction permit; CLI-05-17, 62 NRC 5 (2005)
licensing boards generally should review contested and uncontested issues differently, giving the NRC Staff considerably more deference on uncontested issues; CLI-05-17, 62 NRC 5 (2005)
NRC regulations expressly prohibit *de novo* board review of uncontested AEA issues, but do not apply the bar to NEPA issues; CLI-05-17, 62 NRC 5 (2005)
NRC Staff's underlying technical and factual findings are not open to board reconsideration unless, after a review of the record, the board finds the NRC Staff review inadequate or its findings insufficient; CLI-05-17, 62 NRC 5 (2005)
the likelihood that a reviewing body will rely on the presumption of correctness of a trial court's factual determinations tends to increase when trial judges have lived with the controversy for weeks or months instead of just a few hours; CLI-05-19, 62 NRC 403 (2005)
the standard of ''clear error'' for overturning a board factual finding is quite high; CLI-05-19, 62 NRC 403 (2005)
there was no clear error of fact or other basis for Commission review of a board's decision to use experimental data to calculate how the stainless steel multipurpose storage canister would hold up in an aircraft crash, or its rejection of a DOE Standard formulated for dissimilar situations; CLI-05-19, 62 NRC 403 (2005)
use of a deferential review standard for uncontested issues supports the NRC policies of promptness and efficiency; CLI-05-17, 62 NRC 5 (2005)

SUBJECT INDEX

STANDING TO INTERVENE
an allegation of a special interest in a proceeding, no matter how longstanding, without a showing of a particularized harm is insufficient to establish standing; LBP-05-31, 62 NRC 735 (2005)
automatic full-participation standing is conferred on governmental bodies if they have jurisdiction over the geographical area in which the reactor at issue is located; LBP-05-16, 62 NRC 56 (2005)
in ruling on claims of proximity standing, the Commission determines, on a case-by-case basis, the radius beyond which it believes there is no longer an obvious potential for offsite consequences by taking into account the nature of the proposed action and the significance of the radioactive source; CLI-05-26, 62 NRC 577 (2005)
intervention petitioners must demonstrate that a proposed license transfer would injure their financial, property, or other interests; CLI-05-25, 62 NRC 572 (2005); CLI-05-26, 62 NRC 577 (2005)
mere intellectual or academic interest in a facility or proceeding is insufficient, in and of itself, to demonstrate standing; CLI-05-26, 62 NRC 577 (2005)
petitioner has the burden to demonstrate that a particular licensing action raises an obvious potential for offsite consequences; CLI-05-26, 62 NRC 577 (2005)
proximity standing rests on the presumption that an accident associated with the nuclear facility could adversely affect the health and safety of people working, living, or regularly engaging in activities offsite but within a certain distance of that facility; CLI-05-25, 62 NRC 572 (2005); CLI-05-26, 62 NRC 577 (2005)
the Commission does not permit uninterested persons to intervene and play the role of ''private attorney general'' in NRC adjudications; CLI-05-26, 62 NRC 577 (2005)
STANDING TO INTERVENE, ORGANIZATIONAL
a generalized grievance shared in substantially equal measure by all or a large class of citizens will not result in a distinct and palpable harm sufficient to support standing; LBP-05-31, 62 NRC 735 (2005)
an entity that seeks to intervene on behalf of its members must show that it has an individual member who can fulfill all the necessary standing elements and who has authorized the organization to represent his or her interests; LBP-05-31, 62 NRC 735 (2005)
STATUTORY CONSTRUCTION
because retroactivity is not favored in the law, statutes and regulations will not be construed to have retroactive effect unless their language requires this result; LBP-05-26, 62 NRC 446 (2005)
when a regulatory term is undefined in the regulations, its definition may be gleaned from its plain meaning, the structure of the regulation, and then, if appropriate, the regulatory history; LBP-05-27, 62 NRC 478 (2005)
STAY
litigation expense, even substantial and unrecoupable cost, does not constitute irreparable injury; CLI-05-27, 62 NRC 715 (2005)
preserving the status quo while an appeal is pending on a complex question is not justification for; CLI-05-27, 62 NRC 715 (2005)
the most important requirement is irreparable harm; CLI-05-27, 62 NRC 715 (2005)
where there is no irreparable harm, the Commission is reluctant to rush to judgment on the merits of an appeal before it has the opportunity to examine the board's ruling and the parties' arguments in detail; CLI-05-27, 62 NRC 715 (2005)
SUBPART L PROCEEDINGS
an inadequate privilege log is particularly problematic because no other discovery is allowed and the party filing the motion to compel is forced to shoot in the dark and face a substantive answer by the privilege claimant, without the right to reply; LBP-05-33, 62 NRC 828 (2005)
general ''areas of concern'' are no longer sufficient to trigger a hearing; CLI-05-23, 62 NRC 546 (2005)
Staff is subject to mandatory disclosure obligations to file and update the hearing file and to disclose and/or provide certain additional documents; LBP-05-33, 62 NRC 828 (2005)
Staff's disclosure obligations are not limited to documents that are relevant to the admitted contentions and thus are broader than the disclosure obligations of other parties; LBP-05-33, 62 NRC 828 (2005)
Staff's full compliance with the two mandatory disclosure requirements are the foundation of the fairness and integrity of these proceedings, because no other discovery from the Staff is allowed in such proceedings; LBP-05-33, 62 NRC 828 (2005)

SUBJECT INDEX

SUMMARY DISPOSITION
a board looks into the substance of a contention to the degree necessary to make the determination whether a genuine dispute about a factual issue exists and whether that dispute is over a material fact; LBP-05-19, 62 NRC 134 (2005)
a board's function is to decide whether genuine issues of material fact remain between the parties, not to substantively seek to resolve material factual issues that do exist; LBP-05-19, 62 NRC 134 (2005)
a licensing board may grant summary disposition as to all or any part of a proceeding if the board finds that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-05-19, 62 NRC 134 (2005)
an opposing party must counter each adequately supported material fact with its own statement of material facts in dispute and supporting materials, or the movant's facts will be deemed admitted; LBP-05-20, 62 NRC 187 (2005)
any material facts set forth in movant's statement that are not controverted by a like statement of an opposing party are deemed admitted; LBP-05-19, 62 NRC 134 (2005)
opponent must put forth specific facts showing that there is a genuine issue of material fact to be litigated; LBP-05-19, 62 NRC 134 (2005)
proponent bears a heavy burden to show, among other things, that had the evidence been considered, a materially different result would likely have obtained; LBP-05-20, 62 NRC 187 (2005)
proponent bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts not at issue and any supporting materials that accompany its dispositive motion; LBP-05-19, 62 NRC 134 (2005); LBP-05-20, 62 NRC 187 (2005)
the standard for grant of a motion is a showing that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-05-20, 62 NRC 187 (2005)
this is an appropriate mechanism for seeking the removal of portions of a filing or affidavit that contain technical arguments based on questionable competence; LBP-05-20, 62 NRC 187 (2005)
TERMINATION OF PROCEEDING
intervenor's security clearances must be terminated at the conclusion of the proceeding; LBP-05-15, 62 NRC 53 (2005)
TERRORISM
deliberate terrorist-type attacks are not appropriate issues to be considered in licensing hearings; LBP-05-29, 62 NRC 635 (2005)
environmental impacts of terrorism are insufficiently related to the effects of plant aging to be material to a license renewal proceeding; LBP-05-31, 62 NRC 735 (2005)
petitioner requests that NRC order BWR Mark I and II licensees to conduct a full review of each facility's structural vulnerabilities to air attack; DD-05-4, 62 NRC 782 (2005)
protection of nuclear facilities is undertaken by the Commission itself outside the hearing process and in conjunction with other federal agencies; LBP-05-29, 62 NRC 635 (2005)
TRITIUM
a settlement agreement allows for downgradient offsite monitoring of groundwater for tritium; LBP-05-18, 62 NRC 126 (2005)
URANIUM ENRICHMENT FACILITY PROCEEDINGS
in a uranium enrichment facility construction permit proceeding, a board's duty to conduct, at this stage of the proceedings, the weighing specified in section 51.105(a)(3) is beyond question; CLI-05-17, 62 NRC 5 (2005)
VACATUR
the Commission customarily vacates a board decision when its appellate review is cut short by mootness; CLI-05-22, 62 NRC 542 (2005)
VALVES
performance deficiencies of the 1C cold leg loop stop isolation valve and any failure to timely identify and correct those deficiencies do not constitute a violation; DD-05-5, 62 NRC 791 (2005)
VIOLATIONS
licensee's failure to provide complete and accurate information in its license renewal application is deemed a minor violation and not subject to a civil penalty; DD-05-6, 62 NRC 862 (2005)

SUBJECT INDEX

WAIVER OF RULE
for the Commission to grant an exemption or waiver of section 50.47(a)(1), and thereby permit the adjudication of emergency-planning issues in a license renewal proceeding, four conditions must be met; CLI-05-24, 62 NRC 551 (2005)
proximity to a nuclear power facility located in an adjoining state does not constitute the ''unique circumstances'' that will satisfy the third requirement for an exemption from the bar against challenging regulations in an adjudication; CLI-05-24, 62 NRC 551 (2005)
WASTE CONFIDENCE RULE
an applicant for an early site permit is permitted to rely on this rule for its findings regarding waste disposal; LBP-05-19, 62 NRC 134 (2005)
WITHDRAWAL
terms for withdrawal of an application after the issuance of a notice of hearing may be prescribed by the presiding officer; CLI-05-23, 62 NRC 546 (2005)
WITNESSES, EXPERT
when a witness's qualifications are challenged, the sponsoring party has the burden of demonstrating the witness's expertise; LBP-05-21, 62 NRC 248 (2005); LBP-05-22, 62 NRC 328 (2005)

FACILITY INDEX

AMERICAN CENTRIFUGE PLANT; Docket No. 70-7004
MATERIALS LICENSE; July 28, 2005; MEMORANDUM AND ORDER; CLI-05-17, 62 NRC 5 (2005)
MATERIALS LICENSE; October 7, 2005; MEMORANDUM AND ORDER (Ruling on the Admissibility of Contentions); LBP-05-28, 62 NRC 585 (2005)
BEAVER VALLEY POWER STATION, Units 1 and 2; Docket Nos. 50-334, 50-412
REQUEST FOR ACTION; December 3, 2005; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206; DD-05-6, 62 NRC 855 (2005)
BYRON STATION, Unit 1; Docket No. STN 50-454
REQUEST FOR ACTION; November 8, 2005; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206; DD-05-5, 62 NRC 791 (2005)
HIGH-LEVEL WASTE REPOSITORY; Docket No. PAPO-00
PRE-LICENSE APPLICATION MATTERS; September 22, 2005; MEMORANDUM AND ORDER (Ruling on State of Nevada's June 6, 2005 Motion To Compel); LBP-05-27, 62 NRC 478 (2005)
PRE-LICENSE APPLICATION MATTERS; November 21, 2005; MEMORANDUM AND ORDER; CLI-05-27, 62 NRC 715 (2005)
MILLSTONE NUCLEAR POWER STATION, Units 2 and 3; Docket Nos. 50-336-LR, 50-423-LR
LICENSE RENEWAL; July 20, 2005; MEMORANDUM AND ORDER (Concerning Belated Intervention Petition); LBP-05-16, 62 NRC 56 (2005)
LICENSE RENEWAL; August 4, 2005; MEMORANDUM AND ORDER; CLI-05-18, 62 NRC 185 (2005)
LICENSE RENEWAL; October 26, 2005; MEMORANDUM AND ORDER; CLI-05-24, 62 NRC 551 (2005)
MONTICELLO NUCLEAR GENERATING PLANT; Docket No. 50-263-LR
LICENSE RENEWAL; November 1, 2005; MEMORANDUM AND ORDER (Ruling on Standing and Contention Admissibility); LBP-05-31, 62 NRC 735 (2005)
NATIONAL ENRICHMENT FACILITY; Docket No. 70-3103-ML
MATERIALS LICENSE; July 28, 2005; MEMORANDUM AND ORDER; CLI-05-17, 62 NRC 5 (2005)
MATERIALS LICENSE; October 19, 2005; MEMORANDUM AND ORDER; CLI-05-20, 62 NRC 523 (2005); CLI-05-21, 62 NRC 538 (2005)
MATERIALS LICENSE; November 21, 2005; MEMORANDUM AND ORDER; CLI-05-28, 62 NRC 721 (2005)
PEACH BOTTOM ATOMIC POWER STATION, Units 2 and 3; Docket Nos. 50-277-LT, 50-278-LT
LICENSE TRANSFER; October 26, 2005; MEMORANDUM AND ORDER; CLI-05-26, 62 NRC 577 (2005)
SAVANNAH RIVER MIXED OXIDE FUEL FABRICATION FACILITY; Docket No. 70-03098-ML
MATERIALS LICENSE; July 20, 2005; ORDER (Terminating Proceeding); LBP-05-15, 62 NRC 53 (2005)
THREE MILE ISLAND NUCLEAR STATION, Unit 1; Docket No. 50-289-LT-2
LICENSE TRANSFER; October 26, 2005; MEMORANDUM AND ORDER; CLI-05-25, 62 NRC 572 (2005)
VERMONT YANKEE NUCLEAR POWER STATION; Docket No. 50-271
OPERATING LICENSE AMENDMENT; September 1, 2005; MEMORANDUM AND ORDER (Granting Motion To Dismiss NEC Contention 4); LBP-05-24, 62 NRC 429 (2005)

FACILITY INDEX

OPERATING LICENSE AMENDMENT; December 2, 2005; MEMORANDUM AND ORDER (Admitting Intervenor's New Contention); LBP-05-32, 62 NRC 813 (2005)
OPERATING LICENSE AMENDMENT; December 21, 2005; MEMORANDUM AND ORDER (Ruling on Deliberative Process Privilege Claims); LBP-05-33, 62 NRC 828 (2005)
REQUEST FOR ACTION; August 16, 2005; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206; DD-05-2, 62 NRC 389 (2005)
REQUEST FOR ACTION; November 7, 2005; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206; DD-05-3, 62 NRC 765 (2005)
REQUEST FOR ACTION; December 23, 2005; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206; DD-05-7, 62 NRC 862 (2005)
YANKEE NUCLEAR POWER STATION; Docket No. 50-29-OLA
OPERATING LICENSE AMENDMENT; July 21, 2005; MEMORANDUM AND ORDER (Approving Settlement Agreement and Terminating Proceeding); LBP-05-18, 62 NRC 126 (2005)