

**NUCLEAR REGULATORY COMMISSION  
ISSUANCES**

**OPINIONS AND DECISIONS OF THE  
NUCLEAR REGULATORY COMMISSION  
WITH SELECTED ORDERS**

January 1, 2005 — June 30, 2005

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## ATOMIC SAFETY AND LICENSING BOARD PANEL

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## PREFACE

This is the sixty-first volume of issuances (1–455) of the Nuclear Regulatory Commission and its Atomic Safety and Licensing Boards, Administrative Law Judges, and Office Directors. It covers the period from January 1, 2005, to June 30, 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 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 are 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.

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Nils J. Diaz**, Chairman  
**Edward McGaffigan, Jr.**  
**Jeffrey S. Merrifield**

**In the Matter of**

**Docket Nos. 50-413-OLA  
50-414-OLA**

**DUKE ENERGY CORPORATION  
(Catawba Nuclear Station, Units 1  
and 2)**

**January 5, 2005**

The NRC Staff filed a "Motion for Interlocutory Review" of the Licensing Board's order amending a protective order. The amendment permits counsel for Intervenor to store at her office the exhibits for the prefiled testimony addressing Intervenor's security-related contention. These exhibits contain safeguards information relevant to the Catawba plant as well as to Duke's other nuclear power reactors. The Commission denies the Staff's motion.

**LICENSING BOARDS: AUTHORITY; DELEGATED AUTHORITY**

**ADJUDICATORY BOARDS: DELEGATED AUTHORITY**

**LICENSING BOARDS: REVIEW OF NRC STAFF'S ACTION**

As a general matter, our boards may not exercise supervisory authority over the Staff. *See, e.g., Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), ALAB-772, 19 NRC 1193, 1263 (1984), *rev'd on other grounds*, CLI-85-2, 21 NRC 282 (1985).

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\*CLI-05-1, issued in the matter of Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), is being withheld from publication while the Commission determines which portions of that decision should be withheld from public disclosure as proprietary financial information.

**RULES OF PRACTICE: APPELLATE REVIEW**

**REGULATIONS: INTERPRETATION (10 C.F.R. § 2.786(g))**

**RULES OF PRACTICE: INTERLOCUTORY APPEALS  
(DISCRETIONARY REVIEW); DISCRETIONARY INTERLOCUTORY  
REVIEW; INTERLOCUTORY REVIEW**

One of the grounds for granting discretionary interlocutory review pursuant to 10 C.F.R. § 2.786(g) is that the Board's ruling, if unchecked would cause "serious, immediate and irreparable harm." By its terms, this standard applies to the Commission's discretionary review of certified questions and referred rulings, but the Commission has applied the standards of section 2.786(g) to discretionary interlocutory appeals as well. *See, e.g., Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-01-1, 53 NRC 1, 5 (2001).*

**RULES OF PRACTICE: APPELLATE REVIEW**

**REGULATIONS: INTERPRETATION (10 C.F.R. § 2.786(g))**

**RULES OF PRACTICE: INTERLOCUTORY APPEALS  
(DISCRETIONARY REVIEW); DISCRETIONARY INTERLOCUTORY  
REVIEW; INTERLOCUTORY REVIEW**

It is difficult for us to find "serious, immediate and irreparable harm" where there is no evidence that the Board order has strayed from the Commission's regulations regarding the protection of safeguards information. Moreover, although there arguably is always some increased risk when an additional storage location is authorized for safeguards information, the Board reasonably considered a number of factors in addressing the views of the parties.

**RULES OF PRACTICE: EVIDENCE (ACCESSIBILITY)**

**EVIDENCE: ACCESSIBILITY**

**SAFEGUARDS INFORMATION: SITES FOR EXAMINING  
SAFEGUARDS DOCUMENTS**

It may well be "desirable" to limit the sites at which parties may examine security-related documents. *Pacific Gas & Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-410, 5 NRC 1398, 1406 (1977), review denied, CLI-77-23, 6 NRC 455 (1977).* But our Boards may also take into account the practical concerns and delays that may stem from such limitations in individual cases. "In the last analysis, the Licensing Board is in the best

position to determine the most appropriate circumstances in which [safeguards information] may be viewed.” *Id.* at 1406.

## MEMORANDUM AND ORDER

This proceeding arises from Duke Energy Corporation’s application for a license amendment to authorize the use of four lead test assemblies of mixed oxide (MOX) fuel in one of its Catawba nuclear reactors. On December 21, 2004, the NRC Staff filed a “Motion for Interlocutory Review” of the Licensing Board’s December 17th order amending the protective order issued a year ago in this adjudication.<sup>1</sup> The amendment permits Ms. Diane Curran, counsel for Intervenor Blue Ridge Environmental Defense League (BREDL), to store at her office the exhibits for the prefiled testimony addressing BREDL’s Security Contention 5.<sup>2</sup> These exhibits contain safeguards information relevant to the Catawba plant as well as to Duke’s other nuclear power reactors. Duke supports the Staff’s motion and BREDL opposes it. We deny the Staff’s motion.

### I. BACKGROUND<sup>3</sup>

The protective order, prior to its amendment, permitted Ms. Curran access to certain safeguards documents<sup>4</sup> at either the Commission headquarters or the

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<sup>1</sup> See unpublished Memorandum and Order (Ruling on BREDL Motion To Amend Protective Order (Dec. 17, 2004) (“Board Order”). On December 20, 2004, the NRC Staff filed a Motion for Stay Pending Interlocutory Review of the Board’s December 17, 2004 Order (“NRC Staff’s Motion for Stay”). The Staff also requested that the Commission issue a “housekeeping stay” of the Board order, effective immediately, pending review of the Staff’s motion for stay. NRC Staff’s Motion for Stay at 5. On December 21st the Commission denied the Staff’s December 20th request for a “housekeeping” stay.

<sup>2</sup> Security Contention 5 challenges the adequacy of Duke Energy Corporation’s (Duke) application for exemptions from various NRC regulations governing facilities that possess formula quantities of strategic special nuclear material.

<sup>3</sup> During litigation about BREDL’s security contention, the Commission has dealt with several issues involving BREDL’s access to and use of sensitive safeguards information. See CLI-04-6, 59 NRC 62 (2004) (providing guidance for “need to know” determinations); CLI-04-11, 59 NRC 203 (2004) (accepting certified questions regarding security contention); CLI-04-19, 60 NRC 5 (2004) (declining to revisit “need to know” guidance provided in CLI-04-6); CLI-04-21, 60 NRC 21 (2004) (expert witness qualifications for safeguards/security issues); CLI-04-29, 60 NRC 417 (2004) (setting standard for “need to know” in discovery); and CLI-04-37, 60 NRC 646 (2004) (denying motion for reconsideration of CLI-04-29).

<sup>4</sup> These documents include “the most recent version of the Physical Security Plan and Safeguards Contingency Plan for Catawba, McGuire and Oconee Nuclear Stations, procedures for armed response, and the locations of armed responders.” NRC Staff’s Motion for Interlocutory Review at 4.

offices of Duke's counsel (Winston & Strawn). The protective order also permitted Ms. Curran to store in her own office certain other safeguards documents.<sup>5</sup> The set of documents in Ms. Curran's office contained information derived from primary safeguards documents, while the set of documents at NRC headquarters and Winston & Strawn were themselves the primary documents.

Although Ms. Curran was able to work under this "cumbersome" process<sup>6</sup> for a while, she concluded this autumn that the limited access was impeding her preparation for the upcoming hearing (January 10-14, 2005) on security issues, and would also impede her subsequent preparation of post-hearing pleadings (the last of which is due on February 4, 2005). She initially raised the issue informally with the NRC Staff and sought its agreement for her to store the additional documents in her office from December 17th through February 4th. The Staff, to inform its response, arranged for NRC's Office of Nuclear Security and Incident Response (NSIR) to conduct a security audit of Ms. Curran's office on December 13th. NSIR's representative found that the measures there to protect safeguards information were adequate.<sup>7</sup> The Staff nonetheless refused to agree to BREDL's request. The Staff reasoned that storage of the "primary" safeguards documents at yet another site would unacceptably heighten the risk of their disclosure.

Ms. Curran's next step was to file with the Board a "Motion To Amend Protective Order." The requested amendment to the protective order would permit her to store in her office until February 4, 2005, the exhibits to prefiled testimony that include primary safeguards documents. The Staff objected, arguing that the increased risk of disclosure outweighed Ms. Curran's need for ready access to those documents. Duke concurred, arguing that its own counsel's offices were only about four blocks from those of Ms. Curran, and that the existing limitation on the sites of these primary documents had apparently not had an adverse effect on the conduct of the proceeding.<sup>8</sup>

The Board was not convinced and, on December 17th, granted BREDL's Motion To Amend (subject to one condition summarized below). The Board generally concluded that BREDL's request was reasonable and would assist in the expeditious handling of the proceeding.<sup>9</sup> The Board found that the temporal

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<sup>5</sup> These documents are pleadings and Board orders related to BREDL's security contention, and also the transcripts of closed prehearing conferences. NRC Staff's Motion for Stay, dated Dec. 20, 2004, at 2 & n.2.

<sup>6</sup> BREDL's Motion To Amend Protective Order, dated Dec. 15, 2004, at 3.

<sup>7</sup> Board Order, slip op. at 2.

<sup>8</sup> To effectuate the terms of the protective order, Duke's counsel recently agreed to make those documents available at its offices between 6:00 a.m. and 6:00 p.m., Monday through Friday, and on evenings and weekends "if feasible and if requested by BREDL." NRC Staff's Motion for Interlocutory Review at 3 n.3.

<sup>9</sup> Board Order, slip op. at 3.

and locational restrictions were too onerous a burden to impose on Ms. Curran when she is preparing for a hearing or drafting post-hearing pleadings.<sup>10</sup> The Board particularly noted that the protective order (as it then read) would require Ms. Curran to carry voluminous documents containing safeguards information back and forth between her own office and that of Winston & Strawn. This result would, according to the Board, not only compromise her ability to prepare for the hearing and draft the post-hearing documents, but it would also “increase[] the likelihood of losing control of sensitive material.”<sup>11</sup> The Board therefore granted BREDL’s Motion To Amend, subject to an independent inspection by the NRC’s Office of Administration (OA), Division of Facilities and Security, to confirm that Ms. Curran’s office can “ensure the effective safeguarding of the exhibits in question in her law office.”<sup>12</sup> On December 21st, the Chief of OA’s Security Branch and OA’s Senior Facility Security Specialist conducted this inspection, which resulted in another apparent finding of the adequacy of Ms. Curran’s security measures for protecting safeguards information.<sup>13</sup>

The NRC Staff now seeks expedited discretionary Commission review of the Board’s interlocutory order. The Staff argues that we should grant its motion because the Board’s ruling threatens “serious, immediate and irreparable harm” — one of the grounds for granting discretionary interlocutory review pursuant to 10 C.F.R. § 2.786(g).<sup>14</sup> The claimed “serious . . . harm” is the purportedly increased risk that the security of the primary documents could be compromised while in Ms. Curran’s office, thereby increasing the vulnerability of Duke’s nuclear power stations. The Staff also asserts that these “primary” safeguards documents are more sensitive than the “secondary” safeguards documents (i.e., those containing information derived from the primary documents) already in Ms. Curran’s possession and that their release would therefore create a significantly

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<sup>10</sup> *Id.* at 4. The Board also acknowledged holding the parties to a tight hearing schedule to accommodate Duke’s plans for the proposed MOX lead test assemblies. *Id.* at 3.

<sup>11</sup> *Id.*

<sup>12</sup> *Id.* at 5. This inspection was to be conducted December 21st. *Id.*

<sup>13</sup> The inspectors did request that Ms. Curran implement several additional security measures, which she agreed to do. The Staff questions the Board’s authority to require an OA inspection, but because the inspection has already taken place, we do not address the issue. As a general matter, though, our boards may not exercise supervisory authority over the Staff. *See, e.g., Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), ALAB-772, 19 NRC 1193, 1263 (1984), *rev’d on other grounds*, CLI-85-2, 21 NRC 282 (1985).

<sup>14</sup> By its terms, this standard applies to the Commission’s discretionary review of certified questions and referred rulings. We have, however, applied the standards of section 2.786(g) to discretionary interlocutory appeals as well. *See, e.g., Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-1, 53 NRC 1, 5 (2001). The instant case arises under our “old” Part 2 procedural rules, not the revised version promulgated in Final Rule: “Changes to Adjudicatory Process,” 69 Fed. Reg. 2182 (Jan. 14, 2004).

greater security risk. Finally, the Staff argues that the harm would be both “immediate and irreparable” upon any release of the information.

## II. DISCUSSION

While we appreciate and share in the Staff’s concern regarding the risk of an inadvertent release of safeguards information, we are not convinced that the Board-ordered change in the protective order unacceptably heightens the risk of a security breach in this instance. Most notably, the Board, in amending the protective order, has continued to ensure that the Commission’s regulations regarding the protection of safeguards information have been appropriately applied. As envisioned by 10 C.F.R. § 2.744(e), the parties agreed to operate under a protective order when disclosure of safeguards information is required and a need-to-know is established, as is the case with regard to access by Ms. Curran and BREDL’s expert witness to the documents at issue. As is also required by section 2.744(e), this protective order, in turn, compels the parties to protect the information in a manner consistent with the requirements outlined in 10 C.F.R. § 73.21. The Board-ordered amendment to this protective order does not remove any of these regulatory requirements, but simply allows Ms. Curran’s office to maintain additional safeguards documents — for a limited period — in the same protective fashion that the office maintains other safeguards documents. Thus, it is difficult for us to find “serious, immediate and irreparable harm” where, as here, there is no evidence that the Board order has strayed from the Commission’s regulations regarding the protection of safeguards information.

Moreover, although there arguably is always some increased risk when an additional storage location is authorized for safeguards information, the Board reasonably considered a number of factors in addressing the views of the parties. First, there is ample evidence that Ms. Curran’s office is employing adequate measures to protect safeguards information. Both NSIR and OA have inspected Ms. Curran’s office, and the Staff does not contend that the measures fail to meet our requirements for storing and handling safeguards information. Additionally, the Board-ordered amendment to the protective order conservatively allows Ms. Curran’s office to store the “primary” safeguards documents only for a brief period of time corresponding to the hearing and the associated post-hearing filings. Finally, there exists the Board’s sensible concern that the continued application of the pre-December 17th version of the protective order would pose its own risks of a loss of control over safeguards information from the continuation of Ms. Curran’s current practice of transporting the secondary safeguards documents between offices — a practice compelled by her need to do much if not all of her hearing preparation and post-hearing pleading preparation at the offices of Winston & Strawn.

The fact is that, during the intense time period surrounding an adjudicatory hearing, all counsel may need equal access to critical documents. As our Appeal Board indicated many years ago, it may well be “desirable” to limit the sites at which parties may examine security-related documents.<sup>15</sup> But our Boards may also take into account the practical concerns and delays that may stem from such limitations in individual cases. “In the last analysis, the Licensing Board is in the best position to determine the most appropriate circumstances in which [safeguards information] may be viewed.”<sup>16</sup>

For the reasons set forth above, the NRC Staff’s Motion for Interlocutory Review is *denied*.<sup>17</sup>

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 5th day of January 2005.

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<sup>15</sup> *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-410, 5 NRC 1398, 1406 (1977), *review denied*, CLI-77-23, 6 NRC 455 (1977).

<sup>16</sup> *Diablo Canyon*, ALAB-410, 5 NRC at 1406.

<sup>17</sup> Because the Commission denied the motion for interlocutory review, the motion for stay is moot.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Nils J. Diaz**, Chairman  
**Edward J. McGaffigan, Jr.**  
**Jeffrey S. Merrifield**

**In the Matter of**

**Investigation 1-2003-037**

**RENE CHUN**

**January 5, 2005**

**ORDER**

This matter is before the Commission on Mr. Chun's "Motion for Clarification and Amendment" of our previous Memorandum and Order, CLI-04-34, 60 NRC 607 (2004). We deny the motion to amend the Memorandum and Order. However, as explained below, we find that Mr. Chun's declaration satisfies the requirements stated in CLI-04-34.

In CLI-04-34, we quashed that portion of the subpoena that sought the tapes and notes of Mr. Chun's interview with the former plant employee. We conditioned our action on the requirement that, *inter alia*, Mr. Chun "releas[e] without reservation any claim of ownership in the materials (based upon his creation of them) to the magazine." 60 NRC at 611. The instant motion challenges that requirement.

In CLI-04-34, we noted that the magazine had informed the NRC that it lost the materials at issue during an office move. We included the requirement that Mr. Chun release his rights in the tapes or notes as an effort to ensure that the NRC would have access to those materials in the event that the magazine does, at some point in the near future, discover them. Our concern has now evaporated. In his declaration, Mr. Chun "waive[s] any objection I would otherwise have" to the magazine providing the tapes or notes to the NRC in response to an NRC subpoena. Chun Declaration ¶ 13. We find Mr. Chun's waiver sufficient to meet our goal of assuring NRC's access to the materials, should the magazine ever locate them. Given Mr. Chun's explanation of the circumstances, we also accept



the unsigned contract as fulfillment of the second requirement. Therefore, we find Mr. Chun's declaration meets the requirements of CLI-04-34.

In sum, we accept Mr. Chun's declaration, dated December 21, 2004, as fulfillment of the conditions established in CLI-04-34. We note that Mr. Chun also agrees to the interview pursuant to the subpoena, but that his attorney has a conflict with the date. The Office of Investigations is authorized to reach agreement with Mr. Chun's counsel on a mutually acceptable date, time, and place for the interview of Mr. Chun.

To the extent the motion seeks any further clarifications, modifications, or amendments to CLI-04-34, it is denied.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 5th day of January 2005.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Nils J. Diaz**, Chairman  
**Edward McGaffigan**  
**Jeffrey S. Merrifield**

**In the Matter of**

**Docket No. 52-009-ESP**

**SYSTEM ENERGY RESOURCES, INC.**  
**(Early Site Permit for Grand Gulf**  
**ESP Site)**

**January 18, 2005**

**SUFFICIENCY OF BOARD RULING: PREHEARING**

A ruling at the initial contentions stage, as opposed to a decision after a full evidentiary hearing, is customarily terse. In the early stages of litigation, boards frequently must consider numerous contentions and are expected to act promptly, necessitating reasonable brevity. *See* 10 C.F.R. § 2.309(i) (decision due within 45 days after filing answers and replies). The Board's remarks, plus its reference to the litigants' incorporated arguments, made the basis of its ruling reasonably apparent.

**SUFFICIENCY OF BOARD RULING: PREHEARING**

The Board used the disjunctive "and/or" presumably because not every aspect of Petitioners' contention both failed to raise a material legal or factual dispute and was outside the scope of the hearing. Thus, if either infirmity applies to any portion of Petitioners' contention, that portion was rightly found inadmissible, allowing the Commission to affirm the Board's ruling. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 131 (2004); *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991).

## **NEPA**

### **ENVIRONMENTAL JUSTICE**

While petitioners might prefer different language or emphasis in the environmental report (“ER”), “editing” NEPA documents is not a function of the Commission’s hearing process. “Our busy boards do not sit to parse and fine-tune EISs.” *See 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).

## **NEPA**

### **ENVIRONMENTAL JUSTICE**

Where the information contained in the ER was sufficiently detailed in its descriptions of the minority and low-income populations surrounding the plant, the ER was sufficiently accurate to inform the public as to the socioeconomic makeup of the affected community. Petitioners’ demand for more precision did not justify an NRC adjudicatory hearing.

## **NEPA**

### **ENVIRONMENTAL JUSTICE**

Petitioners’ purported impact, that of poverty-driven inadequacies in emergency response, had not been shown to disproportionately affect the 34% of Claiborne County that are below the poverty level. Without evidence to the contrary, the “environmental impact” Petitioners described in their claim would fall equally on all members of the community — the 66% of the population living above the poverty line in Claiborne County as well as the 34% living below.

## **MEMORANDUM AND ORDER**

This Order affirms the Board’s decision in LBP-04-19,<sup>1</sup> which denied a hearing on contentions submitted by Petitioners National Association for the Advancement of Colored People (Claiborne County, Mississippi Branch), Nuclear Information and Resource Service, Public Citizen, and Mississippi Chapter of the Sierra Club (collectively, “Petitioners”). On appeal, Petitioners challenge one Board ruling only — its rejection of an “environmental justice” claim. We affirm the Board’s ruling.

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<sup>1</sup> 60 NRC 277 (2004).

## I. BACKGROUND

On October 16, 2003, System Energy Resources, Inc. (SERI), submitted an application for an early site permit (ESP) to build an additional nuclear reactor on the site of the existing Grand Gulf Nuclear Station in Claiborne County, Mississippi. As part of that application, SERI submitted a Site Safety Analysis Report, an Environmental Report, Emergency Planning Information, and a Site Redress Plan. If approved, the 20-year ESP would permit use of the site as a location for one or more new nuclear power reactors, but the construction and operation of a new plant would be subject to separate licensing proceedings under 10 C.F.R. Part 52. In February 2004, Petitioners filed a hearing request and petition to intervene. Shortly thereafter, in response to SERI's motion, the Commission approved the use of our new Part 2 revised rules of practice in this proceeding,<sup>2</sup> and gave the Grand Gulf Petitioners 60 days to file contentions.<sup>3</sup>

Petitioners filed several timely contentions — on, among other issues, site suitability, the environment (including environmental justice), and emergency planning. Neither the NRC Staff nor SERI challenged Petitioners' standing, but both challenged the admissibility of Petitioners' contentions. The Board ruled that all Petitioners had established standing, but none of their proffered contentions was admissible.<sup>4</sup> Petitioners pursue an appeal on one contention only — their environmental justice claim that SERI's environmental report (ER) failed to properly consider disparate effects on the minority and low-income population surrounding Grand Gulf. Petitioners' appeal argues that: (1) the Board did not explain its environmental justice ruling adequately, (2) the ER did not adequately describe the local population and the disproportionate harm a reactor accident would cause, and (3) the ER did not discuss the poverty-induced deficiencies in implementing the emergency plan.

We agree with the Board's rejection of Petitioners' claims and therefore affirm its ruling that Petitioners' environmental justice contention is not litigable.

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<sup>2</sup> See Final Rule: "Changes to Adjudicatory Process," 69 Fed. Reg. 2182 (Jan. 14, 2004). See generally *Citizens' Awareness Network v. NRC*, 391 F.3d 338 (1st Cir. 2004). Our new rules establish a less "formal" hearing process for reactor licensing cases than our former 10 C.F.R. Part 2, Subpart G.

<sup>3</sup> *Dominion Nuclear North Anna, L.L.C.* (Early Site Permit for North Anna ESP Site), CLI-04-8, 59 NRC 113, 118-19 (2004). (The new Part 2 rules take effect for proceedings filed after February 13, 2004).

<sup>4</sup> LBP-04-19, 60 NRC at 286-88, 294.

## II. DISCUSSION

### A. General Background on Environmental Justice

In a recent policy statement, the Commission compiled and clarified its position on “environmental justice” matters and their impact on Commission proceedings.<sup>5</sup> Environmental justice is the offspring of the National Environmental Policy Act (NEPA). An environmental justice review under NEPA ensures that the agency considers and publicly discloses factors peculiar to minority or low-income populations that may cause them to suffer harm disproportionate to that suffered by the general population.<sup>6</sup> Executive Order 12898, which directed agencies to take into account environmental justice issues in exercising their statutory duties, created no new substantive right.<sup>7</sup> As we have explained previously, the Commission views E.O. 12898 as relevant only to the Commission’s actions under NEPA and not under any other statutory duty.<sup>8</sup> Because of this, the Commission only takes into account “disproportionate adverse effects” of a project that peculiarly affect an environmental justice community and have some nexus to factors properly within the scope of NEPA.

NEPA’s twin goals are to inform the agency and the public about the environmental effects of a project.<sup>9</sup> At NRC licensing hearings, petitioners may raise contentions seeking correction of significant inaccuracies and omissions in the ER. Our boards do not sit to “flyspeck” environmental documents or to add details or nuances.<sup>10</sup> If the ER (or EIS) on its face “comes to grips with all important considerations” nothing more need be done.<sup>11</sup>

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<sup>5</sup> Nuclear Regulatory Commission, Final Policy Statement: “Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions,” 69 Fed. Reg. 52,040 (Aug. 24, 2004). The Policy Statement essentially restates doctrines emerging from a series of adjudicatory decisions. *See, e.g., Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-20, 56 NRC 147 (2002); *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 100-110 (1998).

<sup>6</sup> 69 Fed. Reg. at 52,044.

<sup>7</sup> *See id.* at 52,046. *Accord, Sua Contra La Contaminacion v. EPA*, 202 F.3d 443, 449 (1st Cir. 2002).

<sup>8</sup> *See* 69 Fed. Reg. 52,046 n.2. *See also Claiborne Enrichment Center*, CLI-98-3, 47 NRC at 102.

<sup>9</sup> *See Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 339 (1989); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348 (2002).

<sup>10</sup> *See Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 71 (2001).

<sup>11</sup> *Id.*

## B. Factual Allegations

According to Petitioners, Claiborne County — the site of Grand Gulf — has a poverty rate of 32.4%, more than twice the poverty rate in the United States as a whole, and an 84.1% African American population. Petitioners also point to the Mississippi tax code, which provides that any nuclear power plant in the state (Grand Gulf being the only one now in existence) is taxed by the state directly instead of the county, so that the county only gets a fraction of the economic benefit that it would if it could tax the property directly. This would likely be true for a new facility built on the site.<sup>12</sup> Other Mississippi counties that host nonnuclear electric plants are allowed to tax the plants directly, Petitioners say. Petitioners believe that the Mississippi tax code is discriminatory and the disparity was motivated by race, although this is not the foundation of their complaint.<sup>13</sup>

Claiborne County has emergency planning duties with respect to the existing Grand Gulf site and would be responsible for providing emergency services in the case of an accident at the proposed plant. Petitioners allege that due to the high level of poverty in the county, the “local agencies that are responsible for responding to an emergency at Grand Gulf [have] major shortages of funding and equipment that seriously impair the agency’s ability to respond to a radiological emergency.”<sup>14</sup> To support these claims, Petitioners submitted declarations from persons currently or formerly responsible for responding to an emergency at Grand Gulf. For example, one of the declarations points out that the county has only one fire station, despite the fact that firefighters would be called on to help evacuate the county if necessary.<sup>15</sup> A declaration from a county deputy sheriff indicates that Claiborne county has only ten law enforcement officers, only one of

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<sup>12</sup> A nuclear facility owned by a “public utility rendering electrical service within the state and . . . which is not owned or operated by an instrumentality of the federal government” is exempt from local taxation. Miss. Code Ann. § 27-35-309(3).

<sup>13</sup> Grand Gulf Unit 1 commenced operations in 1985. In 1986, voters approved an amendment to the Mississippi constitution that allowed the state legislature to deny or limit the local taxing authority’s right to impose taxes on, specifically, nuclear-powered generating plants. The amendment also allowed the legislature to impose a “special mode of valuation, assessment and levy upon nuclear-powered electrical generating plants,” and to distribute the tax as the legislature saw fit. *See Burrell v. Mississippi State Tax Commission*, 536 So. 2d 848 (Miss. 1989).

<sup>14</sup> *See* Contentions of the National Association for the Advancement of Colored People–Claiborne County, Mississippi Branch, Nuclear Information and Resource Service, Public Citizen, and Mississippi Chapter of the Sierra Club Regarding Early Site Permit Application for Site of Grand Gulf Nuclear Power Plant (May 3, 2004) (“Contentions”), at 22.

<sup>15</sup> *See* Contentions, Exhibit 3.1-4 (Declaration of A.C. Garner, former Civil Defense Director, Claiborne County) (“a number of inadequacies in the Grand Gulf radiological emergency plan were identified” during his tenure as Civil Defense Director, the emergency operations center is in “deplorable condition,” and the Sheriff’s department cannot function as first responder to a security threat).

whom patrols at night.<sup>16</sup> There is just one hospital in the county, also designated as a “first responder” in case of a radiological emergency. According to the declaration submitted by the hospital administrator, it is in debt and unprepared to respond to a radiological emergency.<sup>17</sup>

Based on these allegations, Petitioners’ contention argued that building a new nuclear power plant in Claiborne County presents an environmental justice issue because, by imposing the danger of a radiological emergency on a community that cannot afford to respond appropriately, the new plant will have a disproportionately high and adverse environmental effect on an impoverished and minority community. They complained that SERI’s ER failed to consider these disproportionate impacts, as well as certain other impacts, such as reduced property values, not raised on appeal.

### C. Sufficiency of the Board’s Decision

Petitioners argue that the Board’s opinion fails to explain why it refused to admit their environmental justice contention and “has made a guessing game out of this appeal.”<sup>18</sup> The Board’s decision on environmental justice consists of a page-long discussion which, rather than summarizing the positions of the litigants, incorporates by reference the relevant portions of their pleadings and the transcript from the prehearing conference.<sup>19</sup> The Board concluded that the “contention and its supporting bases fail to raise a material legal or factual dispute *and/or* fall outside the scope of this proceeding.”<sup>20</sup>

We agree that the Board’s incorporation of the parties’ arguments by reference and its use of the disjunctive “and/or” forces the reader to work to discern its meaning. But a ruling at the initial contentions stage, as opposed to a decision after a full evidentiary hearing, is customarily terse. In the early stages of litigation, boards frequently must consider numerous contentions and are expected to act promptly,<sup>21</sup> necessitating reasonable brevity. Here, the Board’s remarks, plus its reference to the litigants’ incorporated arguments, make the basis of its ruling reasonably apparent. The Board found no “genuine dispute of material”

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<sup>16</sup> See Contentions, Exhibit 3.1-5, Declaration of Joseph C. Davis, Deputy Sheriff, Claiborne County. See also GGNS Early Site Permit Application, Part 4, Emergency Planning Information, at 3-5.

<sup>17</sup> See Contentions, Exhibit 3.1-8, Declaration of Wanda C. Fleming, Claiborne County Hospital Administrator (“Realistically, we are ill prepared, at present, to respond to any large-scale medical emergency or act of terror”).

<sup>18</sup> Appeal Brief at 2.

<sup>19</sup> LBP-04-19, 60 NRC at 293-94. The relevant pleadings are Contentions at 12-17, SERI Contentions Response (date) at 21-35, Grand Gulf Petitioners Reply at 9-13, and Tr. at 311-57.

<sup>20</sup> LBP-04-19, 60 NRC at 294 (emphasis added).

<sup>21</sup> See 10 C.F.R. § 2.309(i) (decision due within 45 days after filing answers and replies).

fact “and/or” that petitioners’ allegations concerning emergency planning were outside the scope of the proceeding.<sup>22</sup>

The Board used the disjunctive “and/or” presumably because not every aspect of Petitioners’ contention both failed to raise a material legal or factual dispute and was outside the scope of the hearing. Thus, if either infirmity applies to any portion of Petitioners’ contention, that portion was rightly found inadmissible, allowing us to affirm the Board’s ruling.<sup>23</sup> We suggest, however, that in future admissibility rulings, licensing boards avoid the potentially confusing and/or formulation.

**D. Contention 3.1: Inadequate Consideration of Disproportionate Adverse Impacts on Minority and Low-Income Community**

Petitioners’ contention says:

SERI’s Environmental Report (“ER”), prepared in support of its Early Site Permit application, does not comply with the National Environmental Policy Act (“NEPA”) because it does not adequately consider the adverse and disparate environmental impacts of the proposed nuclear facilities on the predominately African American and low-income community of Claiborne County.<sup>24</sup>

In support of this, Petitioners offered a number of claims.<sup>25</sup> But on appeal they rely on two specific infirmities in the ER, which we now consider in turn.

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<sup>22</sup> See LBP-04-19, 60 NRC at 294.

<sup>23</sup> See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 131 (2004); *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991).

<sup>24</sup> Contentions of the National Association for the Advancement of Colored People–Claiborne County, Mississippi Branch, Nuclear Information and Resource Service, Public Citizen, and Mississippi Chapter of the Sierra Club Regarding Early Site Permit Application for Site of Grand Gulf Nuclear Power Plant (“Contentions”), May 3, 2004, at 12.

<sup>25</sup> These included alleged disparities in property values and economic benefits, among other grievances. We view all claims not argued in the Petitioners’ appellate brief as waived and do not consider them further. See *International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-02-21, 56 NRC 161, 165 (2002); *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 198 n.1 (1998).



**1. *Incomplete Information Concerning Minorities and Low-Income Populations and Risk of Injury to Them***

**a. *Incomplete Population Information***

Petitioners' contention alleged that the ER's descriptions underrepresent the minority and impoverished populations potentially affected by the proposed facility:

At the outset, while the ER acknowledges the existence of minority and low-income population within a 50-mile radius around the Grand Gulf site, *see* ER § 2.5.4, the ER understates the levels of minority representation and poverty in Claiborne County, which hosts the Grand Gulf site and which takes up much of the area in the portion of Grand Gulf's 10-mile radius emergency planning zone that lies on the east side of the Mississippi River. As a result, the ER falsely minimizes the disparity of the adverse impacts on the minority and low-income community of Claiborne County.<sup>26</sup>

In addition, Petitioners maintain, the ER erroneously compares the poverty rate in Claiborne County (32.4%) to the poverty rate in Mississippi at large (19.9%) in order to conclude that most of Claiborne County is not "low-income."<sup>27</sup>

NEPA requires that information in the environmental impact statement be sufficiently accurate to inform both the acting agency and the public. On its face, SERI's ER discloses that Claiborne County is one of the poorest counties in the second-poorest state in the country.<sup>28</sup> The ER also discloses that the Mississippi tax code exempts "any nuclear generating plant owned by a public utility" from local taxes.<sup>29</sup> The ER describes how the state taxes the facility directly (not less than \$20 million annually), allocates more than \$3 million to Claiborne County as the host county, then divides most of the remaining funds among the counties (including Claiborne) in proportion to the energy used by retail customers therein.<sup>30</sup>

The ER includes a table showing the population distribution by race in the low population zone (area within a 2-mile radius of the existing reactor containment), the emergency planning zone (the area within a modified 10-mile radius around the Grand Gulf site), and the region (the area within a 50-mile radius around the

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<sup>26</sup> Contentions at 12 (citation omitted).

<sup>27</sup> Contentions at 18-19. *See* Petitioners' Brief on Appeal at 16-17.

<sup>28</sup> *See* Grand Gulf Nuclear Station Early Site Permit Application, Part 3 — Environmental Report ("ER"), at 2.5-3.

<sup>29</sup> *See* ER at 2.5-4.

<sup>30</sup> *Id.* *See also* Miss. Code Ann. § 27-35-309.

site).<sup>31</sup> According to this table, African Americans constitute 77.5% of the low population zone, 63.3% of the emergency planning zone, and 45.1% of the region. The ER also includes maps showing the population distribution by race and by below-poverty-level households.<sup>32</sup>

Petitioners argue that because of the way SERI chose to report the information, the ER does not accurately reflect how high the minority and low-income population in the areas immediately surrounding the site is. The ER, for example, does not disclose that Claiborne County itself is over 84% African American. In addition, even though 32.4% of the population of Claiborne County lives below the poverty level, the ER includes a graph showing only a small area of Claiborne County to be a “low-income population.”<sup>33</sup> The map identifies as “low income” only one tiny area, about 25 miles south of the plant, where the poverty level is “20 percentage points” higher than the comparison area, the State of Mississippi. SERI based its “low-income” designation on an NRC Office Instruction, LIC-203,<sup>34</sup> which defines a “low-income population” as one where “the poverty level . . . is significantly greater (typically 20 percentage points) than the low-income populations percentage in the geographic area chosen for comparative analysis.”<sup>35</sup> Because 32.4% of Claiborne County is below poverty level, and the rest of Mississippi has a poverty rate of 19.9%, Claiborne County did not show up on the map as a “low-income population.”

Petitioners argue that according to the office instruction SERI used for its analysis, the area for comparison should not be the State of Mississippi, but the entire geographic area that includes all alternative sites considered in the ER. The guidance document states that “[w]hen a regulatory action is being considered that involves alternative site considerations, such as an [ESP], then, in addition to determining the individual geographic area for each site [Staff should] determine an overall geographic area that encompasses all of the alternative site geographic areas.”<sup>36</sup> The ER considered six other nuclear plants, including some in the Northeast where the poverty rate is much lower than it is in the South.<sup>37</sup>

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<sup>31</sup> See ER, Table 2.5-3.

<sup>32</sup> See ER, Figures 2.5-6 and 2.5-7 (showing areas in Mississippi and Louisiana where the minority population in a 50-mile radius of the site exceeds 50%), Figures 2.5-8 and 2.5-9 (showing locations of low-income populations in Mississippi and Louisiana within a 50-mile radius of the site).

<sup>33</sup> See ER, Figure 2.5-8.

<sup>34</sup> Office of Nuclear Reactor Regulation, LIC-203, Procedural Guidance for Preparing Environmental Assessments and Considering Environmental Issues (2001).

<sup>35</sup> LIC-203 at D-9.

<sup>36</sup> LIC-203 at D-4.

<sup>37</sup> Comparison sites included James Fitzpatrick and Indian Point in upstate New York, and Pilgrim in Massachusetts.

By comparison to this larger geographic area, Petitioners say, all of Claiborne County would be considered a low-income population area.

The Environmental Justice Policy Statement, which became final after the Board's decision, suggests that SERI's method of comparing the local population to the state, rather than the entire region comprising alternative sites considered, is the correct one.<sup>38</sup> However, even if Petitioners' method were shown to be the better method, it would not be sufficient to create a litigable, material issue here. The ER states in the narrative, and includes a table showing, that 32.4% of Claiborne County lives below the poverty level.<sup>39</sup> The ER cites statistics showing that Claiborne's unemployment rate is 12.4%, higher than the surrounding areas and more than twice that of Mississippi at large.<sup>40</sup> It does not appear that SERI attempted in any way to hide or skew the fact that Claiborne County's population is impoverished. While Petitioners might prefer different language or emphasis, "editing" NEPA documents is not a function of our hearing process.<sup>41</sup> "Our busy boards do not sit to parse and fine-tune EISs."<sup>42</sup>

We find the information contained in the ER sufficiently detailed in its descriptions of the minority and low-income populations surrounding the plant. The choice to analyze populations within 2-, 10-, and 50-mile radius of the proposed reactors is a reasonable one, grounded in our regulations and reflecting emergency planning considerations.<sup>43</sup> On its face, the ER is sufficiently accurate to inform the public as to the socioeconomic makeup of the affected community. Petitioners' demand for more precision does not justify an NRC adjudicatory hearing.

*b. Risk of Injury Due to Proximity to the Reactor*

Petitioners' environmental contention maintained that SERI's ER ignored the special risk of injury to the local community:

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<sup>38</sup> See Environmental Justice Policy Statement, 69 Fed. Reg. at 52,048. The Policy Statement "retains the current procedure as articulated by NMSS and NRR in their respective office guidance" for identifying the impacted areas, but then states that the minority and low income population in the affected area should be compared to the minority and low income population in the "County (or Parish) and the State," without mention of the larger area comprising all the alternative sites considered in the EIS. *Id.*

<sup>39</sup> See ER at 2.5-3; ER, Table 2.5-7.

<sup>40</sup> ER at 2.5-4.

<sup>41</sup> See *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).

<sup>42</sup> *Id.*

<sup>43</sup> The ER (and ultimate EIS) need only make reasonable comparisons, not every conceivable one. See *Communities Against Runway Expansion v. FAA*, 355 F.3d 678, 688-89 (D.C. Cir. 2004).

The ER also fails to address the environmental impacts of the proposed reactor(s) in light of the “factors peculiar to” the minority and low-income community of Claiborne County. . . . For instance, the ER fails to address the fact that, by virtue of the simple factor of its close proximity to the proposed reactor(s), the minority and low-income community bears the highest risk of injury and illness as a result of severe accidents at the proposed facility.<sup>44</sup>

We disagree that the ER omitted necessary information concerning the potential impacts to minorities and low-income populations due to their proximity to the reactor. The ER, in fact, reveals that the population closest to the reactor is overwhelmingly African American and largely poor. Thus, there is no missing information and no material litigable issue on that point.

## **2. *Inadequate Emergency Response***

Finally, Petitioners offer the complaint that the ER does not address alleged poverty-driven deficiencies in emergency planning:

Moreover, the ER fails to address the fact that the Claiborne County government is particularly unprepared to respond to a radiological emergency or a security threat at the proposed reactor(s), as a result of the high level of poverty in the county and the effects of a discriminatory tax policy that sends most of the tax revenue from Grand Gulf out of Claiborne County.<sup>45</sup>

This allegation does not support a litigable contention because, as the Board properly found, Petitioners fail to raise a material legal or factual dispute. As is evident from the ER, and as discussed previously, there is no dispute regarding the presence of a low-income community surrounding the proposed site. First, Petitioners have failed to point to any environmental impact, as analyzed by the Applicant in the ER, that they believe to be in error. Moreover, Petitioners’ purported impact, that of poverty-driven inadequacies in emergency response, has not been shown to disproportionately affect the 34% of Claiborne County that are below the poverty level. Without evidence to the contrary, the “environmental impact” Petitioners describe in their claim would fall equally on all members of the community — the 66% of the population living above the poverty line in Claiborne County as well as the 34% living below.<sup>46</sup>

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<sup>44</sup>Contentions at 13 (citation omitted). *See also* Pet. Brief on Appeal at 17-18.

<sup>45</sup>Contentions at 13. *See also* Pet. Brief on Appeal at 18-20.

<sup>46</sup>Petitioners offered a standalone emergency planning contention, but the Board rejected it. *See* LBP-04-19, 60 NRC at 297-98. The Board said that “with the contention what the Grand Gulf  
(Continued)

### III. CONCLUSION

We therefore affirm the Board's ruling rejecting the environmental justice contention proffered by Petitioners.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK

Secretary of the Commission

Dated at Rockville, Maryland,  
this 18th day of January 2005.

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Petitioners ultimately seek to challenge is the practicability of the emergency plan, which is a determination that would properly be made at the combined construction permit/operating license stage of the Part 52 licensing process.' *Id.* Petitioners did not appeal the Board ruling on the emergency planning contention.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Nils J. Diaz**, Chairman  
**Edward McGaffigan, Jr.**  
**Jeffrey S. Merrifield**

**In the Matter of**

**Docket No. 70-3103-ML**

**LOUISIANA ENERGY SERVICES, L.P.**  
**(National Enrichment Facility)**

**January 18, 2005**

The Commission reviews the issue whether depleted uranium from a uranium enrichment facility appropriately may be categorized as a low-level radioactive waste, assuming the intent to treat the material as a waste requiring disposal instead of utilizing the material as a resource.

**REGULATIONS: INTERPRETATION (10 C.F.R. PART 61)**

Part 61 contains the NRC's licensing requirements for land disposal of low-level radioactive waste. The regulations contain general performance objectives — specifying limits on radiation dose levels — applicable to *any* form of land disposal of low-level radioactive waste, and also specific technical requirements for near-surface disposal of radioactive waste.

**REGULATIONS: INTERPRETATION (10 C.F.R. PART 61)**

The suitability of wastes for near-surface disposal and their appropriate classification (e.g., Class A, B, or C) is determined by the amounts of long-lived and short-lived radionuclides contained in the waste, and whether radiation dose levels will drop to acceptable levels over specified periods of time.

**REGULATIONS: INTERPRETATION (10 C.F.R. PART 61)**

Those low-level wastes with radionuclide concentration limits even greater than the limits specified for Class C — commonly termed GTCC (greater-than-Class-C) waste — are generally unacceptable for near-surface disposal, although on a case-by-case basis and with proposed special processing or design, such waste may be approved as suitable for near-surface disposal.

**REGULATIONS: INTERPRETATION (10 C.F.R. PART 61)**

Even if a particular form of GTCC waste does not meet the Part 61 requirements for near-surface disposal, it may still be acceptable for disposal by more protective land disposal methods, if the Part 61 performance objectives for land disposal can be met.

**USEC PRIVATIZATION ACT: DEPLETED URANIUM FROM ENRICHMENT LICENSEE**

The USEC Privatization Act requires the Department of Energy to accept for disposal depleted uranium from any NRC uranium enrichment licensee, if depleted uranium is ultimately determined to be low-level radioactive waste. The statute does not specify any further conditions, such as whether the depleted uranium waste also meets NRC requirements for near-surface disposal or any other method of disposal, or whether it falls within a particular class of low-level radioactive waste (e.g., A, B, etc.).

**USEC PRIVATIZATION ACT: DEFINITION OF “LOW-LEVEL RADIOACTIVE WASTE”**

Section 3102 of the USEC Privatization Act specifies that low-level radioactive waste has the same meaning set forth in section 2(9) of the Low-Level Radioactive Waste Policy Act.

**REGULATIONS: INTERPRETATION (10 C.F.R. PART 61)**

The bottom line for disposal of low-level radioactive wastes is the performance objectives of 10 C.F.R. Part 61, Subpart C, which set forth the ultimate standards and radiation limits for (1) protection of the general population from releases of radioactivity, (2) protection of individuals from inadvertent intrusion, (3) protection of individuals during operations, (4) stability of the disposal site after closure. Any technical requirements are intended to assure that the performance objectives in Subpart C are met.

## **REGULATIONS: INTERPRETATION**

GTCC waste is itself a form of low-level radioactive waste. It is a low-level radioactive waste that exceeds the concentration limits of radionuclides established for Class C waste in 10 C.F.R. § 61.55. Under Part 61, GTCC low-level waste may be acceptable for disposal in a near-surface disposal facility with special design provisions, or acceptable for land disposal in an intermediate land disposal facility. But even if it were sent to a geologic repository governed under Part 60 — a choice that conceivably could be made for cost reasons — it would still be low-level radioactive waste.

## **NUCLEAR REGULATORY COMMISSION: FINDING ON DEPLETED URANIUM**

Consistent with the Low-Level Radioactive Waste Policy Act, the Commission finds that depleted uranium, assuming it is not treated as a resource, is appropriately categorized as a low-level radioactive waste. Regardless of which form the uranium may take at the time of disposal (e.g.,  $UF_6$  or  $U_3O_8$ ) or its radionuclide concentration, depleted uranium belongs most appropriately under the general low-level radioactive waste category. In the event depleted uranium at some particular radionuclide concentration level and volume were to require disposal by methods more stringent than near-surface disposal, it would still be low-level waste.

## **MEMORANDUM AND ORDER**

### **I. INTRODUCTION**

In CLI-04-25,<sup>1</sup> the Commission accepted for review the issue whether depleted uranium from a uranium enrichment facility appropriately may be categorized as a “low-level radioactive waste,” assuming the intent to treat the material as a “waste” requiring disposal instead of utilizing the material as a “resource.” We directed the parties to submit briefs on the issue. For the reasons given below, we conclude that depleted uranium is properly considered a low-level radioactive waste.

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<sup>1</sup> 60 NRC 223 (2004).



## II. BACKGROUND

At issue is a contention on waste disposal submitted by Intervenor Nuclear Information and Resource Service (NIRS) and Public Citizen (PC).<sup>2</sup> The contention claims that the Applicant, Louisiana Energy Services, L.P. (LES), does not have a “plausible strategy” for disposal of the depleted uranium hexafluoride (DUF<sub>6</sub>) waste that the LES facility will produce.<sup>3</sup> Most of the Intervenor’s contention challenged LES’s first proposed strategy — indeed its “preferred plausible strategy”<sup>4</sup> — to dispose of the depleted uranium through *private* sector conversion and disposal of the tails.<sup>5</sup> However, one basis for the Intervenor’s contention challenged a second option proposed by LES for disposition of the tails: transfer of the tails to the Department of Energy (DOE), pursuant to section 3113 of the USEC Privatization Act.<sup>6</sup>

Section 3113(a) of the USEC Privatization Act requires DOE, if requested, “to accept for disposal low-level radioactive waste, including depleted uranium if it were ultimately determined to be low-level radioactive waste,” generated by “any person licensed by the Nuclear Regulatory Commission to operate a uranium enrichment facility.”<sup>7</sup> Consequently, the hearing notice issued for this proceeding specified that “an approach by LES to transfer to DOE for disposal by DOE of LES’s depleted tails pursuant to Section 3113 of the USEC Privatization Act” would “constitute[] a ‘plausible strategy’” for disposal of the depleted tails if the tails could be considered low-level radioactive waste under 10 C.F.R. Part 61.<sup>8</sup> The hearing notice also stated that if LES did not demonstrate a use as a resource for the uranium in the depleted tails, the tails “may be considered waste,”<sup>9</sup> and if “such waste meets the definition of ‘waste’ in 10 C.F.R. § 61.2, the depleted tails are to be considered low-level radioactive waste within the meaning of 10 C.F.R. Part 61.”

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<sup>2</sup> As originally submitted by the Intervenor, the contention was titled “waste storage and disposal” and given the number “2.1.” As admitted by the Board, the contention is titled “NIRS/PC EC-3/TC-1 — Depleted Uranium Hexafluoride Storage and Disposal.”

<sup>3</sup> See Petition To Intervene by NIRS/PC (April 6, 2004) (“Intervenor’s Petition/Contention”) at 25-31.

<sup>4</sup> See National Enrichment Facility Environmental Report, Rev. 2 (July 2004) (“Environmental Report”) at 4.13-8.

<sup>5</sup> The Board admitted the Intervenor’s “private sector” claim, and the Commission affirmed that aspect of the Board’s “plausible strategy” decision. See CLI-04-25, 60 NRC at 226.

<sup>6</sup> See Intervenor’s Petition/Contention at 27-31; Environmental Report at 4.13-8 to 4.13-9.

<sup>7</sup> 42 U.S.C. § 2297h-11 (2000). The Act also provides that the generator of the waste must reimburse DOE for cost of the disposal.

<sup>8</sup> See CLI-04-3, 59 NRC 10, 22 (2004), *reprinted in* 69 Fed. Reg. 5873, 5877 (Feb. 6, 2004).

<sup>9</sup> LES states that it will “make a determination as to whether the depleted uranium is a resource or a waste and will notify the NRC.” See Environmental Report at 4.13-7.

In challenging LES's proposed strategy (termed "Option 2") to dispose of the depleted uranium tails by transfer to DOE, the Intervenor stressed that this option would be "plausible" only if the "NRC makes a formal determination that [depleted uranium tails] are low-level radioactive waste."<sup>10</sup> Their contention goes on to argue that depleted uranium is not low-level radioactive waste, and that therefore the proposed strategy to have DOE accept, convert, and dispose of the depleted uranium tails is not a "plausible" strategy.<sup>11</sup>

The current issue before us is a narrow one. We consider only whether depleted uranium is properly considered low-level radioactive waste, and thus whether transfer of the LES tails to DOE pursuant to section 3112 of the USEC Privatization Act constitutes a "plausible strategy" for disposal of the tails. We need not address any of the other waste disposal options, including particular disposal methods (e.g., engineered trenches, concrete vaults, underground mine) that LES has proposed.

To understand all the issues discussed in this Order requires some knowledge of 10 C.F.R. Part 61, which sets out the performance objectives for disposal of low-level radioactive waste, and includes a classification scheme — and related technical disposal requirements — for near-surface disposal of low-level radioactive waste. We begin, therefore, with a brief background description of Part 61. Next, we address the relevant statutory definitions of low-level radioactive waste. We then turn to why the Intervenor's contention contains a misunderstanding of Part 61 and of what constitutes low-level radioactive waste. We conclude with our reasons why depleted uranium should be properly characterized as a low-level radioactive waste.

### III. ANALYSIS

#### A. Background on Part 61

Part 61 contains the NRC's licensing requirements for land disposal of low-level radioactive waste. The regulations include general performance objectives applicable to any method of land disposal of low-level radioactive waste.<sup>12</sup> Land disposal — as opposed to sea or extraterrestrial disposal — includes both disposal near the earth's surface and deeper disposal. "Near-surface" methods of disposal involve disposal at a depth of approximately 30 meters (although burial deeper than 30 meters may also be acceptable).<sup>13</sup> More protective methods of land

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<sup>10</sup> Intervenor's Petition/Contention at 28.

<sup>11</sup> *See id.* at 27-31.

<sup>12</sup> 10 C.F.R. § 61.7(a).

<sup>13</sup> *Id.*

disposal, often called “intermediate” land disposal,<sup>14</sup> may involve deeper burial than near-surface disposal, a mined cavity, or special engineered barriers or disposal techniques.<sup>15</sup> The definition of “land disposal” facilities excludes only a geologic repository,<sup>16</sup> for such facilities are regulated under Part 60 or 63.

While Part 61 contains general performance objectives — specifying limits on radiation dose levels — applicable to *any* form of land disposal of low-level radioactive waste, it also contains specific technical requirements for near-surface disposal of radioactive waste.<sup>17</sup> Part 61 establishes a classification scheme for those types of low-level radioactive wastes considered “generally acceptable for near-surface disposal.”<sup>18</sup> Such wastes are divided into three classes: A, B, and C.

The suitability of wastes for near-surface disposal and their appropriate classification (e.g., Class A, B, or C) is determined by the amounts of long-lived and short-lived radionuclides contained in the waste, and whether radiation dose levels will drop to acceptable levels over specified periods of time.<sup>19</sup> Safety objectives for near-surface disposal include assuring stability of the waste and of the disposal site after closure — in other words, assuring that the waste form maintains its structural integrity. Specific goals include protecting against inadvertent intruders and minimizing water’s access to waste (to limit the potential for radionuclides migrating).<sup>20</sup> Compared to Class A waste, Class B waste requires “more rigorous requirements on waste form to ensure stability after disposal.”<sup>21</sup> Class C waste “not only must meet more rigorous requirements on waste form to ensure stability but also requires additional measures at the disposal facility” to protect against inadvertent intrusion.<sup>22</sup>

Those low-level radioactive wastes with radionuclide concentration limits even greater than the limits specified for Class C — commonly termed GTCC [greater-than-Class-C] waste — are “generally unacceptable for near-surface disposal,” although on a case-by-case basis and with proposed “special processing or design” such waste may be approved as suitable for near-surface disposal.<sup>23</sup>

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<sup>14</sup> See, e.g., Final Rule: “Disposal of Radioactive Wastes,” 54 Fed. Reg. 22,578, 22,580-81 (May 25, 1989).

<sup>15</sup> See, e.g., NUREG-0782, “Draft Environmental Impact Statement on Part 61, Licensing Requirements for Land Disposal of Radioactive Waste,” Vol. 2 at 1-2, 2-4, 2-5 (Sept. 1981).

<sup>16</sup> See 10 C.F.R. § 61.2.

<sup>17</sup> See 10 C.F.R. §§ 61.7, 61.50.

<sup>18</sup> See Final Rule: “Licensing Requirements for Land Disposal of Radioactive Waste,” 47 Fed. Reg. 57,446, 57,452 (Dec. 27, 1982) (Final Rule, “Licensing Requirements”).

<sup>19</sup> See 10 C.F.R. § 61.55(a)(3), (4).

<sup>20</sup> See 10 C.F.R. § 61.7(b)(1), (2).

<sup>21</sup> 10 C.F.R. § 61.55(a)(2)(ii).

<sup>22</sup> 10 C.F.R. § 61.55(a)(2)(iii).

<sup>23</sup> *Id.*

Moreover, even if a particular form of GTCC waste does not meet the Part 61 requirements for near-surface disposal, it may still be acceptable for disposal by more protective land disposal methods, if the Part 61 performance objectives for land disposal can be met.<sup>24</sup>

We turn now to the Intervenor's contention, specifically as it challenges LES's proposed strategy for DOE to dispose of depleted uranium.

### **B. The USEC Privatization Act and NIRS/PC Contention on DOE Strategy**

The USEC Privatization Act requires DOE to accept for disposal depleted uranium from any NRC uranium enrichment licensee, if depleted uranium is "ultimately determined to be low-level radioactive waste."<sup>25</sup> The statute does not specify any further conditions, such as whether the depleted uranium waste also meets NRC requirements for near-surface disposal or any other method of disposal, or whether it falls within a particular class of low-level radioactive waste (e.g., A, B, etc.). Under the statute, therefore, if LES's depleted uranium is low-level waste, regardless of radionuclide concentration, DOE must accept it for disposal.

The hearing notice in this proceeding specified one way of showing that the depleted uranium tails are low-level waste: if the tails meet the definition of "waste" in 10 C.F.R. § 61.2. That definition reads as follows: "Waste means those low-level radioactive wastes containing source, special nuclear, or byproduct material that are acceptable for disposal in a land disposal facility."

Recently, the Commission received a brief from USEC, Inc., which is not a party to this proceeding, but like LES, also has pending before the NRC an application to construct and operate a uranium enrichment facility, and therefore has an interest in whether the transfer of depleted uranium tails to DOE is a plausible waste disposal strategy.<sup>26</sup> USEC submits that depleted uranium tails "do *not* need to meet the 10 C.F.R. 61.2 definition of 'Waste' to be considered LLW."<sup>27</sup> We agree.

The term "waste" in the Part 61 definition is very clearly, as USEC states, "a subset of the larger category of LLW," and refers specifically to "those" low-level wastes that are acceptable for land disposal under Part 61.<sup>28</sup> This is

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<sup>24</sup> See, e.g., 10 C.F.R. §§ 61.55(a)(2)(iv), 61.58.

<sup>25</sup> 42 U.S.C. § 2297h.

<sup>26</sup> The Commission chose to treat the USEC brief as an *amicus* filing in this proceeding, and allowed the parties to respond to the brief. See Order (12/01/04) (unpublished).

<sup>27</sup> USEC, Inc. Brief on the Proper Classification of Depleted Uranium Tails (Oct. 18, 2004) ("USEC Brief") at 6 (emphasis in original).

<sup>28</sup> *Id.*

evident from the “waste” definition itself, and from the broader definition of *low-level radioactive waste* that immediately follows it in section 61.2:

[L]ow-level waste has the same meaning as in the Low-Level Waste Policy Act, that is, radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in section 11e.(2) of the Atomic Energy Act (uranium or thorium tailings and waste).

Most low-level radioactive wastes likely would be acceptable for some form of land disposal, and thus would fall within the section 61.2 “waste” definition,<sup>29</sup> given the wide array of potential land disposal methods — near-surface and intermediate — that may be governed under Part 61.<sup>30</sup> (Only a geologic repository — which instead is regulated under Part 60 or 63 — is not encompassed by the Part 61 definition of “land disposal” facilities.)<sup>31</sup> Nonetheless, USEC is correct that the section 61.2 “waste” definition does not “represent a comprehensive definition of LLW [low-level waste],” and thus that, conceivably, some materials “may not meet the [Part 61] definition of ‘[w]aste’ . . . but nevertheless may properly be classified as LLW [low-level waste].”<sup>32</sup>

The “plausible strategy” contention before us concerns LES’s proposed strategy to dispose of depleted uranium by transfer to DOE, pursuant to the USEC Privatization Act. That Act does not mention Part 61 and refers generally to “low-level radioactive waste,” not to an NRC-established subset of that waste. We therefore agree with USEC that in determining whether the proposed DOE option is a “plausible strategy,” we need not resolve the question whether the LES depleted uranium tails also would meet the “waste” definition in section 61.2. As USEC states, “inclusion of the reference to the [Part 61] definition of

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<sup>29</sup> See, e.g., Proposed Rule: “Licensing Requirements for Land Disposal of Radioactive Waste,” 46 Fed. Reg. 38,081, 38,082 (July 24, 1981) (emphasis added) (“Part 61 is intended to deal with the disposal of *most* wastes included in this [Low-Level Radioactive Waste Policy Act] definition.”) Whether a low-level radioactive waste is “acceptable for land disposal” depends upon whether (1) the waste meets the Part 61 criteria for near-surface disposal; or (2) the NRC, after evaluating the “specific characteristics of the waste, disposal site, and method of disposal,” finds reasonable assurance that radiation exposures will not exceed the limits established in the Part 61 performance objectives for land disposal. See 10 C.F.R. §§ 61.58, 61.55(a)(2)(iv), 61.40, 61.55 (requirements for near-surface disposal).

<sup>30</sup> See, e.g., 10 C.F.R. § 61.7(a); Final Rule: “Disposal of Radioactive Wastes,” 54 Fed. Reg. at 22,581.

<sup>31</sup> See 10 C.F.R. § 61.2; Final Rule: “Disposal of Radioactive Wastes,” 54 Fed. Reg. at 22,580. The NRC has regulations for “specific types of disposal facilities . . . . Part 60 applies to any geologic repository for HLW [high-level waste], regardless of what other types of radioactive wastes may be disposed of there,” while “Part 61 pertains to land disposal facilities other than repositories.” Final Rule: “Disposal of Radioactive Wastes,” 54 Fed. Reg. at 22,579.

<sup>32</sup> USEC Brief at 6.

“Waste’ ” in the hearing notice added an unnecessary requirement for showing that material is low-level radioactive waste.<sup>33</sup> Our inquiry must begin with the USEC Privatization Act and how it expressly defines low-level waste.

Section 3102 of the USEC Privatization Act specifies that “ ‘low-level radioactive waste’ has the meaning” set forth in section 2(9) of the Low-level Radioactive Waste Policy Act.<sup>34</sup> In turn, section 2(9) of the Act<sup>35</sup> defines low-level radioactive waste as radioactive material that:

(A) is not high-level radioactive waste, spent nuclear fuel, or byproduct material (as defined in section 11e.(2) of the Atomic Energy Act of 1954 (42 U.S.C. 2014(e)(2)))<sup>36</sup> and

(B) the Nuclear Regulatory Commission, consistent with existing law and in accordance with paragraph (A), classifies as low-level radioactive waste.

The Intervenor’s contention does not contend that LES’s depleted uranium tails will contain high-level radioactive waste, spent nuclear fuel, or 11e(2) byproduct material. In other words, their contention nowhere suggests that depleted uranium falls into any other general category of waste other than low-level radioactive waste. Instead, the contention reflects a misunderstanding of the structure and content of Part 61 and its relation to the Low-Level Radioactive Waste Policy Act, which determines ultimately what kinds of wastes may fall under the “umbrella” category of low-level radioactive waste.

Specifically, in challenging the DOE disposal strategy option, the Intervenor’s argue that “[t]he 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 depleted uranium “meets neither requirement.”<sup>37</sup> The contention further argues that “[t]he long half-life of all three uranium isotopes . . . , the fact that they are all alpha emitters, and the specific activity of DU [depleted uranium] . . . all point to the classification of DU as GTCC [greater-than-Class-C] waste.”<sup>38</sup> The Intervenor’s conclude that depleted uranium as proposed for disposal by LES is unsuitable for near-surface disposal and will require disposal in a deep geologic repository. None of these arguments, however, even if correct, would preclude categorizing depleted uranium as a low-level radioactive waste.

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<sup>33</sup> *Id.*

<sup>34</sup> 42 U.S.C. § 2297h.

<sup>35</sup> 42 U.S.C. § 2021b(9).

<sup>36</sup> The 10 C.F.R. § 61.2 definition of low-level radioactive waste also excludes transuranic waste, as does the low-level radioactive waste definition in the Nuclear Waste Policy Act of 1982 (*see* 42 U.S.C. § 10102). Depleted uranium tails are not transuranic waste.

<sup>37</sup> *See* Intervenor’s Petition/Contention at 28.

<sup>38</sup> *Id.* at 29.

To begin with, the intervenors' suggestion that only wastes suitable for disposal by near-surface methods can be categorized as low-level radioactive wastes is patently incorrect. Part 61 identifies three classes of waste typically suitable for near-surface disposal — Classes A, B, and C — but in no way suggests that these are the only wastes considered low-level radioactive waste, or even that Part 61 applies only to such wastes. On the contrary, Part 61 explicitly governs “any method of land disposal” of low-level radioactive waste, including methods more stringent than near-surface.<sup>39</sup> Low-level radioactive wastes are not limited to those suitable for near-surface disposal.

Indeed, when Part 61 was issued, its environmental impact statement explicitly acknowledged that the NRC might receive license applications involving disposal of low-level radioactive waste requiring either an enhanced near-surface disposal method or “intermediate” land disposal methods. It was — and remains — the NRC’s intent to “retain the flexibility to be able to address these license applications in the existing framework of the [Part 61] rule.”<sup>40</sup> Thus, Part 61 did not originally “establish an absolute concentration limit for land disposal of transuranic or other radionuclides.”<sup>41</sup> The Part 61 performance objectives would govern all applications involving land disposal of low-level radioactive waste, including waste that might require more isolation than near-surface methods.

In the end, the “bottom line for disposal” of low-level radioactive wastes are the *performance objectives* of 10 C.F.R. Part 61, Subpart C,<sup>42</sup> which set forth the ultimate standards and radiation limits for (1) protection of the general population from releases of radioactivity; (2) protection of individuals from inadvertent intrusion; (3) protection of individuals during operations; (4) and stability of the disposal site after closure.<sup>43</sup> Thus, while there may not yet be detailed technical criteria established for all of the kinds of land disposal that might be proposed under Part 61, criteria can be developed “on a case-by-case basis,” as needed.<sup>44</sup> After all, any technical requirements are “intended to help ensure that the performance objectives established in Subpart C are met,” but they are “not the end in themselves, . . . [only] a means of achieving the end,”<sup>45</sup>

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<sup>39</sup> 10 C.F.R. § 61.7(a) (emphasis added).

<sup>40</sup> NUREG-0945, “Final Environmental Impact Statement (FEIS) on 10 C.F.R. Part 61, Licensing Requirements for Land Disposal of Radioactive Waste,” Vol. 2 (Nov. 1982) (“FEIS for Part 61”), at B-92.

<sup>41</sup> *Id.*

<sup>42</sup> FEIS for Part 61, Vol. 2, at B-107.

<sup>43</sup> 10 C.F.R. §§ 61.41, 61.42, 61.43, 61.44.

<sup>44</sup> *See, e.g.*, Final Rule: “Licensing Requirements for Land Disposal of Radioactive Wastes,” 58 Fed. Reg. 33,886, 33,887 (June 22, 1993) (clarifying that Part 61 performance objectives can apply to the licensing of aboveground disposal facilities for low-level radioactive waste, although Part 61 does not contain technical criteria specific to aboveground disposal).

<sup>45</sup> FEIS for Part 61, Vol. 2, at B-91.

which are the performance standards. Specific disposal requirements for more stringent land disposal methods, therefore, “were left to be addressed in action on a specific application, subsequent guidance, and rulemaking effort, if rulemaking is warranted.”<sup>46</sup>

In any event, low-level radioactive waste can encompass both those wastes suitable for near-surface disposal and those that may require greater isolation. That a particular waste might not meet the requirements for near-surface disposal does not mean it is not low-level waste. Recognizing this defeats the Intervenor’s contention attacking the DOE disposal option. At its heart, that contention rests on the Intervenor’s claim that depleted uranium “fits into the waste category of GTCC [greater-than-Class-C] waste” because of its specific radioactivity and because it has long-lived radiation-emitting isotopes.<sup>47</sup> But GTCC waste is itself a form of *low-level radioactive waste*. It is a “low-level radioactive waste that exceeds the concentration limits of radionuclides established for Class C waste in § 61.55” of Part 61.<sup>48</sup> Thus, even if we assume that the Intervenor is correct, and that the depleted uranium from the LES facility conceivably might ultimately be classified as GTCC waste, such waste is a form of low-level radioactive waste.<sup>49</sup>

Since its inception, Part 61 has treated GTCC waste as low-level radioactive waste. Part 61 established radionuclide concentration limits for the first three classes of low-level radioactive wastes (A, B, and C), but never considered that those wastes that do not fall within the other defined waste categories (e.g., high-level waste, spent nuclear fuel) but simply exceed the Class C limits in section 61.55 are anything other than a low-level radioactive waste, albeit one not typically suitable for near-surface disposal.<sup>50</sup> Among the three classes of low-level radioactive wastes that are routinely acceptable for near-surface disposal, Class C waste “denotes the highest radionuclide concentrations of the three [classes]”; but Class C waste “does not denote a maximum concentration limit for low-level

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<sup>46</sup> Branch Technical Position Statement on Licensing of Alternative Methods of Disposal of Low-Level Radioactive Waste, 51 Fed. Reg. 7806, 7807 (Mar. 6, 1986); *see also* Final Rule: “Licensing Requirements,” 47 Fed. Reg. at 57,451; Final Rule: “Disposal of Radioactive Wastes,” 54 Fed. Reg. at 22,581, 22,579. Because no intermediate land disposal facilities ever were constructed, the NRC never had the need to develop and issue regulations outlining specific technical requirements for land disposal methods other than near-surface disposal.

<sup>47</sup> *See* Intervenor’s Petition/Contention at 29-30.

<sup>48</sup> *See* 10 C.F.R. § 72.3.

<sup>49</sup> *See generally* Final Rules: “Disposal of Radioactive Wastes,” 54 Fed. Reg. 22,578 (discussing “greater-than-Class-C (GTCC) low-level radioactive waste”); *see also, e.g.*, Interim Storage for Greater than Class C Waste, 66 Fed. Reg. 51,823 (Oct. 11, 2001) (while GTCC waste is generally unsuitable for near-surface disposal “it is considered as LLW [low-level waste].”

<sup>50</sup> *See generally* NUREG-0782, “Draft Environmental Impact Statement on 10 C.F.R. Part 61, Licensing Requirements for Land Disposal of Radioactive Waste,” Vol. 2 (Sept. 1981).



wastes.”<sup>51</sup> Because “there is no regulatory limit on the concentrations of LLW [low-level waste] . . . some LLW (exceeding Class C concentrations) may [even] have concentrations approaching those of HLW [high-level waste].”<sup>52</sup>

Indeed, in 1989 the NRC considered revising the definition of *high-level* radioactive waste to include greater-than-Class-C wastes because intermediate land disposal facilities had not yet become available. But the agency explicitly chose to maintain GTCC wastes within the category of low-level wastes, concluding that to ensure the safe disposal of GTCC waste it would be unnecessary and counterproductive to alter waste category definitions.<sup>53</sup> Instead of broadening the high-level waste definition, the NRC amended Part 61 to highlight the need for prior NRC approval of land disposal methods for GTCC, and to state that without such approval the GTCC waste would require disposal in a geologic repository. Even so, the agency stressed that while GTCC waste is “not generally acceptable for near-surface disposal,” and thus may require disposal methods “more stringent” than near-surface disposal, a geologic repository is only *one* of several potential “more stringent” disposal methods for GTCC waste.<sup>54</sup> Various alternative or “intermediate” land disposal methods for GTCC wastes could be approved by the Commission,<sup>55</sup> such as disposal at an intermediate depth, or disposal with special engineered barriers. In short, as we discussed above, “[a] wide variety of disposal methods, including all of those currently proposed as ‘intermediate’ disposal methods could be licensed under Part 61,”<sup>56</sup> taking into consideration the Part 61 performance objectives and applicable radiation standards.

Under Part 61, GTCC low-level waste may be acceptable for disposal in a near-surface disposal facility with special design provisions, or acceptable for land disposal in an intermediate land disposal facility.<sup>57</sup> But even if it were sent to a geologic repository governed under Part 60 — a choice that conceivably could be made for cost reasons — it would still be “GTCC [greater-than-Class-C] LLW [low-level waste].”<sup>58</sup>

In sum, the Intervenor’s challenge to the DOE disposal option as a “plausible strategy” for disposal of the LES depleted uranium tailings rests on inaccurate premises — that only waste suitable for near-surface disposal can be low-level

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<sup>51</sup> Advance Notice of Proposed Rulemaking: “Definition of High-Level Radioactive Waste,” 52 Fed. Reg. 5992, 5994 (Feb. 27, 1987).

<sup>52</sup> *Id.*

<sup>53</sup> *See generally* Final Rule: “Disposal of Radioactive Wastes,” 54 Fed. Reg. 22,578.

<sup>54</sup> *See id.* at 22,580.

<sup>55</sup> *Id.*

<sup>56</sup> *Id.* at 22,581; *see also id.* at 22,578.

<sup>57</sup> *See* 10 C.F.R. §§ 61.7(b)(5), 61.55(a)(2)(iv), 61.58.

<sup>58</sup> *See* Final Rule: “Disposal of Radioactive Wastes,” 54 Fed. Reg. at 22,578, 22,579-81.

radioactive waste and that GTCC waste is not a low-level waste. Because these assumptions are incorrect on their face, the portion of the Intervenor's contention challenging the DOE disposal option does not raise a "genuine dispute . . . on a material issue" for litigation as our contention rules require.<sup>59</sup> While the contention raises factual arguments over whether the LES waste may properly be disposed of in a near-surface waste disposal facility (a matter we need not resolve today), such allegations are simply not material to the DOE "plausible strategy" issue before us. Even if proved, they would not show that depleted uranium should be categorized as anything other than a low-level radioactive waste. It is depleted uranium's status as low-level radioactive waste, not its suitability (or nonsuitability) for near-surface disposal, that triggers DOE's statutory duty to accept the waste for disposal under the USEC Privatization Act.

### C. Depleted Uranium Is a Low-Level Radioactive Waste

In assessing whether the proposed DOE disposal option is a "plausible strategy," the *only* question to be answered is whether depleted uranium is a low-level radioactive waste, not whether it meets one of the particular low-level waste classifications, or whether a near-surface disposal facility will be adequate. Consistent with the Low-Level Radioactive Waste Policy Act, the Commission finds that depleted uranium, assuming it is not treated as a resource, is appropriately categorized as a low-level radioactive waste. Depleted uranium is not high-level waste, spent nuclear fuel, 11e(2) byproduct material, or transuranic waste as those waste categories are currently defined under relevant statutes and regulations.<sup>60</sup> Further, no other statute, regulation, or consideration either precludes or would render inappropriate identifying depleted uranium as a low-level radioactive waste.

Low-level waste traditionally has been defined by what it is not. Thus, both the "Low-Level Radioactive Waste Policy Act[] and the Commission's regulations in 10 C.F.R. Part 61 currently classify wastes as 'low-level' if they are not otherwise classified as high-level wastes or certain other types of materials (e.g., uranium mill tailings)"<sup>61</sup> and the Commission further finds the categorization appropriate. Depleted uranium clearly is not spent fuel, transuranic waste, or 11e(2) byproduct material. Nor does it meet the high-level-waste definition, which includes specific kinds of wastes such as irradiated fuel and the liquid and solid wastes resulting from the processing of irradiated fuel. Indeed, as we recounted above, the NRC years ago considered but explicitly rejected the idea of

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<sup>59</sup> See 10 C.F.R. § 2.309(f)(1).

<sup>60</sup> See, e.g., NWPA, 42 U.S.C. §§ 10101(12), 10101(23); AEA, 42 U.S.C. § 2014e(2); 10 C.F.R. § 60.2.

<sup>61</sup> 52 Fed. Reg. at 5997; see also 10 C.F.R. § 61.2 (low-level waste definition, following "waste" definition).

broadening the high-level waste definition to encompass those low-level wastes with the highest radionuclide concentrations — the GTTC wastes.<sup>62</sup> Regardless of which form the uranium may take at the time of disposal (e.g., UF<sub>6</sub> or U<sub>3</sub>O<sub>8</sub>) or its radionuclide concentration, depleted uranium belongs most appropriately under the general low-level radioactive waste category. In the event depleted uranium at some particular radionuclide concentration level and volume were to require disposal by methods more stringent than near-surface disposal, it would still be low-level waste.

Although the Commission itself may not have explicitly declared previously, as a matter of law, that depleted uranium is a form of low-level radioactive waste, it has long been understood within the NRC to fall within the low-level radioactive waste umbrella.<sup>63</sup> A more difficult question — and one we need not answer today — concerns whether the LES material, in the volumes and concentration proposed, will meet the Part 61 requirements for near-surface disposal. The Commission agrees with the Intervenors that a definitive conclusion on this and other disposal method questions cannot be reached at this time, and may require further environmental or safety analysis. Our decision should not be read to intimate any Commission view on this issue, which relates both to the plausibility of LES's proposed private disposal options, and to financial assurance — issues that remain before the Board.<sup>64</sup>

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<sup>62</sup> See generally Final Rule: “Disposal of Radioactive Wastes,” 54 Fed. Reg. 22,578.

<sup>63</sup> For example, in the proposed Part 61 rule, depleted uranium was one of the radionuclides included in the low-level waste classification charts found in 10 C.F.R. § 61.55, with assigned upper-bound concentration limits for near-surface disposal. See Proposed Rule, 46 Fed. Reg. at 38,097. Prior to issuance of the final rule, however, the Staff removed uranium from the charts because at the time the types of uranium-bearing material typically disposed of by NRC licensees did not pose a sufficient safety hazard to warrant inclusion in the charts. See FEIS (Part 61), Vol. 1 at 5-37 to 5-38. But at no point did the Staff suggest that depleted uranium waste — at any radionuclide concentration — would be anything other than a low-level radioactive waste.

Before the Commission, the Intervenors cite a 1991 SECY paper titled the “Disposition of Depleted Uranium From Enrichment Plants,” highlighting the “unique licensing issue” presented by disposal of depleted uranium from a uranium enrichment plant. See SECY-91-019 (Jan. 25, 1991). The paper nonetheless concludes that if depleted uranium from uranium enrichment facilities is treated as a waste instead of a resource, “it is a unique form of *low-level waste* that would require disposal.” *Id.* at 4 (emphasis added).

<sup>64</sup> See Contention NIRS/PC EC-5/TC-2 AGNM TC-i (Decommissioning Costs); NIRS/PC EC-6/TC-3 (Costs of Management and Disposal of Depleted UF<sub>6</sub>). It appears that when the Intervenors discuss the question whether material may be disposed of as “low-level waste,” they may mean whether near-surface disposal is acceptable. But as we have explained at length in today’s decision, that is not a question we need answer in considering the plausible-strategy contention.

Another point warrants mention. In accepting review of whether depleted uranium is a low-level radioactive waste, the Commission in CLI-04-25 directed the parties to address 10 C.F.R. § 61.55(a)(6),

(Continued)

#### IV. CONCLUSION

We conclude today that depleted uranium properly is considered a form of low-level radioactive waste. Accordingly, pursuant to section 3113 of the USEC Privatization Act, disposal of the LES depleted uranium tails at a DOE facility represents a “plausible strategy” for disposition of the tails. We therefore reverse the admission to this proceeding of the portion of the Intervenor’s plausible-strategy contention NIRS/PC EC-3/TC-1 that challenges the DOE disposal option (termed Basis “D” in the Intervenor’s contention and renamed by the Board Basis “C”).

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 18th day of January 2005.

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a rule that we believed might bear on our analysis. The parties addressed the rule in their briefs. However, because our decision rests on the relevant statutes — the USEC Privatization Act and the Low-Level Radioactive Waste Policy Act — we need not reach the issues concerning section 61.55(a)(6) that have been presented in the briefs.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Nils J. Diaz**, Chairman  
**Edward McGaffigan, Jr.**  
**Jeffrey S. Merrifield**

**In the Matter of**

**Docket Nos. (Redacted)**  
**(License Nos. (Redacted))**

**ALL POWER REACTOR  
LICENSEES AND RESEARCH  
REACTOR LICENSEES WHO  
TRANSPORT SPENT NUCLEAR FUEL**

**January 19, 2005**

The Commission concludes that Public Citizen's procedural contention, that certain NRC security orders amount to unlawfully promulgated regulations, is without merit.

**NUCLEAR REGULATORY COMMISSION: CHOICE OF  
RULEMAKING OR ADJUDICATION**

The Commission has discretion under the Administrative Procedure Act and the Atomic Energy Act to impose binding, prospectively applicable legal requirements by rulemaking or adjudication. In issuing spent fuel security requirements to four licensees, the Commission chose to act by adjudication rather than rulemaking so that the orders could be tailored to the peculiar needs of individual licensees if necessary, and to protect safeguards information. By choosing adjudication over rulemaking to impose supplemental security requirements, the Commission maximized its flexibility to act swiftly in response to unanticipated changes to the threat environment.

The fact that no one requested a hearing to challenge the substance of the NRC's July 2, 2004, spent fuel security orders does not transform the proceeding from adjudication into rulemaking. The NRC's July 2, 2004, spent fuel security

orders do not repeal or repudiate existing rules, but require compliance with new, more stringent security requirements that supplement those already found in NRC regulations, so rulemaking procedures were not required.

The issuance of an order modifying individual licenses fits well within the definition of “adjudication” under the Administrative Procedure Act.

#### **RULES OF PRACTICE: CONSTRUCTION**

A clause in security orders requiring compliance “notwithstanding any Commission regulation” states a rule of construction — if, in implementing the order, licensees perceive a conflict between the baseline requirements of NRC regulations and the supplemental requirements of the order, the more stringent requirement applies.

#### **RULES OF PRACTICE: CONTENTIONS (PROCEDURAL ARGUMENTS)**

Intervenor stated a valid procedural contention by challenging the NRC’s July 2, 2004, spent fuel security orders as an unlawful rulemaking conducted without notice-and-comment procedures.

#### **LICENSING BOARDS: ASSIGNMENT OF RESPONSIBILITY**

Referral to the Atomic Safety and Licensing Board is not necessary where Intervenor raises purely procedural and legal challenges to NRC action that do not require factfinding.

## **MEMORANDUM AND ORDER**

### **I. BACKGROUND**

On July 2, 2004, the Nuclear Regulatory Commission (NRC) issued an order to four licensees imposing enhanced security measures for spent nuclear fuel shipments.<sup>1</sup> On August 2, 2004, Public Citizen, Inc., requested a hearing on the order. Public Citizen contends that the security order “is unlawful because it

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<sup>1</sup> See *In the Matter of All Power Reactor Licensees and Research Reactor Licensees Who Transport Spent Nuclear Fuel; Order Modifying License (Effective Immediately)*, 69 Fed. Reg. 42,071 (July 13, 2004). The precise details of this security order are not publicly available because they have been designated Safeguards Information. See *id.* at 42,072.

is a substantive regulation, and it has been promulgated without the notice-and-comment rulemaking procedures required by the Administrative Procedure Act, 5 U.S.C. § 553, and the Atomic Energy Act, 42 U.S.C. § 2239(a).’’<sup>2</sup>

On September 3, 2004, the Commission issued an order holding Public Citizen’s hearing request in abeyance pending the outcome of related litigation in the D.C. Circuit between Public Citizen and the NRC.<sup>3</sup> There, too, Public Citizen maintained that NRC security orders amounted to unlawful “rules.” The D.C. Circuit subsequently held that case in abeyance pending a possible NRC rulemaking.<sup>4</sup> Hence, on October 29, 2004, the Commission lifted its abeyance order in this case and invited responses to Public Citizen’s hearing request. No responses to Public Citizen’s hearing request have been received.

We have considered Public Citizen’s hearing request carefully, but remain persuaded that it is lawful to enhance security requirements through adjudicatory orders rather than the rulemakings Public Citizen would prefer. Thus, although we will assume *arguendo* that Public Citizen has standing to challenge the order and has stated an admissible contention by raising a procedural claim,<sup>5</sup> further administrative litigation is pointless. Referral to the Atomic Safety and Licensing Board is unnecessary because Public Citizen has raised purely procedural and legal challenges to the spent fuel security order at issue — there is no need for Board factfinding or other proceedings in this case. For the reasons stated below, we conclude Public Citizen’s contention lacks merit as a matter of law.

## II. ANALYSIS

Public Citizen contends that the Commission’s spent fuel security order is unlawful because it is really a regulation promulgated without the notice-and-comment rulemaking procedures required by the Administrative Procedure Act (APA), the Atomic Energy Act (AEA), and NRC regulations.<sup>6</sup> Whether this contention succeeds or fails turns entirely on Public Citizen’s effort to characterize the Commission’s security order as a “rule.” If the security order is a rule, then the APA’s notice-and-comment procedures apply to this proceeding. But if the order is a form of APA adjudication, those procedures are not required.

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<sup>2</sup> Hearing Request at 1.

<sup>3</sup> *Public Citizen, Inc. and San Luis Obispo Mothers for Peace v. NRC*, No. 03-1181 (D.C. Circuit) (filed June 30, 2003).

<sup>4</sup> *See id.*, Order dated September 17, 2004.

<sup>5</sup> *See generally* 10 C.F.R. § 2.309(d), (f); *cf. Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 92-96 (1993) (allowing NRC litigation on procedural claim).

<sup>6</sup> *See* APA, 5 U.S.C. § 553; AEA, 42 U.S.C. § 2239(a); 10 C.F.R. § 2.804.

Public Citizen first argues that the security order is really a rule “because it prospectively imposed binding requirements on private entities subject to NRC’s authority . . . .”<sup>7</sup> The Commission’s security order unquestionably imposes binding legal requirements and has future effect. But that does not transform the order into a rule. As both the AEA and the APA recognize, binding legal requirements can be imposed in two ways — by the issuance of orders through adjudicatory processes, or by the issuance of rules through notice-and-comment procedures. Nothing in the AEA or the APA requires the Commission to establish prospectively applicable safety or security standards by rulemaking alone.

If Public Citizen were correct that the Commission is constrained to employ only rulemaking procedures to impose prospective requirements, several provisions of the AEA would be rendered meaningless. For example, language in AEA § 161b<sup>8</sup> authorizing the Commission to issue orders to establish safety and security “standards” — i.e., criteria to be followed in the future — would be a dead letter. So would language in AEA § 147<sup>9</sup> requiring the Commission to prescribe regulations or issue orders as necessary to prohibit the unauthorized disclosure of safeguards information.

The APA does not require this result. As the Supreme Court has held, the APA provides agencies with considerable flexibility to choose between rulemaking and adjudicatory procedures when making law.<sup>10</sup> Here, the Commission chose adjudication for a number of sound reasons. A primary reason was the need to protect the details of the order, which are safeguards information and cannot be publicly disclosed. Protection of safeguards information is more easily achieved in the adjudicatory context, where well-established procedures for the protection of safeguards information exist.<sup>11</sup>

The Commission also based its choice on the need for regulatory flexibility and administrative efficiency. The order required individual licensees to “notify the Commission . . . if compliance with any of the requirements [in the order] is unnecessary in their specific circumstances,” or if “implementation of any of the requirements would cause the licensee to be in violation of the provisions of any Commission regulation or the facility license.”<sup>12</sup> The order also allowed individual licensees to seek relaxation or modification of the new security requirements upon a showing of “good cause.”<sup>13</sup> Through these mechanisms, the Commission could

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<sup>7</sup> Hearing Request at 4.

<sup>8</sup> 42 U.S.C. § 2201(b).

<sup>9</sup> 42 U.S.C. § 2167.

<sup>10</sup> *See, e.g., NLRB v. Bell Aerospace Co.*, 416 U.S. 267 (1974); *SEC v. Chenery Corp.*, 332 U.S. 194 (1947).

<sup>11</sup> *See* 10 C.F.R. §§ 2.390(a)(3), 2.390(f), 2.705(c), 2.709(f).

<sup>12</sup> 69 Fed. Reg. at 42,072.

<sup>13</sup> *Id.*



tailor its security requirements to the peculiar needs of individual licensees if necessary, and do so in a single adjudicatory proceeding.

Moreover, using the adjudicatory process allows the Commission to more readily adapt its security enhancements in response to an evolving terrorist threat. Prematurely codifying requirements in legislative-type regulations might limit the Commission's ability to act swiftly and efficiently to deal with future, unanticipated changes to the threat environment.

Still, Public Citizen does not consider this an adjudicatory proceeding because "[t]he Commission did not 'adjudicate' anything in the ordinary sense of the word: No parties appeared before it in a contested proceeding, whether on the record or otherwise, involving the application of law to fact."<sup>14</sup> But this is only because the licensees subject to the order did not request a hearing or challenge the particulars of the order, despite their opportunity to do so. Had a party brought forth a substantive challenge to the order, the Commission would have fairly considered that challenge and resolved it, perhaps resulting in substantive changes to the order's requirements. That this did not actually occur makes this proceeding no less an adjudication.

As a legal matter, this proceeding falls well within the APA's definition of "adjudication." Under the APA, "adjudication" includes any "agency process for the formulation of an order."<sup>15</sup> An "order" may be developed in a "licensing" process — i.e., an "agency process respecting the . . . modification . . . of a license."<sup>16</sup> Thus, the APA explicitly recognizes proceedings such as this, which result in the issuance of an order modifying licenses, as a form of "adjudication" to which notice-and-comment procedures do not apply.

Public Citizen argues that the security order cannot be considered an adjudication because it is "an across-the-board standard" applicable to "a broad class of regulated entities."<sup>17</sup> To be clear, the security order Public Citizen challenges applies only to the four licensees the order names.<sup>18</sup> The order does not apply prospectively to applicants for new licenses (as a rule would). And unlike a rule, the order remains in effect only "until the Commission determines otherwise . . ."<sup>19</sup> Thus, the order lacks the kind of prospective legal effect that is fundamentally characteristic of NRC regulations.

Public Citizen next argues that the Commission's decision to act by adjudication rather than rulemaking was impermissible because the order essentially

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<sup>14</sup> Hearing Request at 13.

<sup>15</sup> 5 U.S.C. § 551(7).

<sup>16</sup> 5 U.S.C. § 551(6), (9).

<sup>17</sup> Hearing Request at 12.

<sup>18</sup> Those licensees had near-term plans to ship spent nuclear fuel, which necessitated the issuance of additional security measures by order.

<sup>19</sup> 69 Fed. Reg. at 42,072.

amends existing rules, which cannot be done without following notice-and-comment procedures. Public Citizen relies on language in the order itself to support this argument, noting that the order “govern[s] the behavior of licensees ‘notwithstanding any Commission regulation or license to the contrary.’”<sup>20</sup>

This argument misinterprets the language and purpose of the order. The order does not repudiate or rescind any NRC safety and security requirements. Rather, the order imposes new, more stringent security requirements that supplement those already found in NRC regulations. The “notwithstanding” clause Public Citizen refers to simply states a rule of construction — if, in implementing the order, licensees perceive a conflict between the baseline requirements of NRC regulations and the supplemental requirements of the order, the more stringent requirement applies.

Public Citizen also argues that the order is an impermissible amendment of NRC regulations because “requirements concerning its subject matter are already set forth in 10 C.F.R. § 73.37 . . . .”<sup>21</sup> But this argument goes too far. If accepted, it would mean that the Commission could never issue orders dealing with a given subject once a regulation concerning that subject already exists. Under this theory, the NRC would be forced to adopt needlessly lengthy and prescriptive regulations at every turn, knowing that it could not act on the same subject in the future by issuing adjudicatory orders. Or, Public Citizen’s theory might lead the NRC to rescind all regulations and forgo rulemaking entirely, dealing only in adjudication when developing new requirements. Neither option is desirable or consistent with the APA or the AEA, which afford the Commission discretion in its choice of lawmaking procedures.

In sum, the Commission’s decision to impose new requirements by order rather than rule was made quite deliberately and for legitimate reasons. It was not made, as Public Citizen suggests, to achieve “an end run around the rulemaking process” or to deprive interested parties of an opportunity to comment on Commission policy.<sup>22</sup>

### III. CONCLUSION

The Commission has met its obligations under the AEA in this proceeding by offering a hearing on the order challenged by Public Citizen. That order

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<sup>20</sup> Hearing Request at 8, *quoting* NRC Order, 69 Fed. Reg. at 42,072.

<sup>21</sup> *Id.*

<sup>22</sup> Hearing Request at 11. As we have frequently stated, the Commission welcomes perspectives on its security policy, and members of the public are free to submit views on the proper scope or content of the NRC’s security requirements through written correspondence, a petition for rulemaking under 10 C.F.R. § 2.802, or a petition for enforcement action under 10 C.F.R. § 2.206.

did not amend or rescind any safety or security requirements contained in NRC regulations. Therefore, the notice-and-comment procedures set forth in the APA and NRC regulations do not apply. Public Citizen's contention is without merit.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 19th day of January 2005.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Michael C. Farrar**, Presiding Officer  
**Dr. Charles N. Kelber**, Special Assistant

**In the Matter of**

**Docket No. 30-36239-ML**  
**(ASLBP No. 03-814-01-ML)**  
**(Materials License)**

**CFC LOGISTICS, INC.**

**January 11, 2005**

Following the failure of any remaining Petitioners to come forward during the specified timeframe to present their opposition to the facility, as the Board had requested in the November 4, 2004 Memorandum and Order approving the Settlement Agreement entered into by other Petitioners (LBP-04-24, 60 NRC 475), the Presiding Officer dismisses all the remaining Petitioners and terminates the proceeding.

**RULES OF PRACTICE: SETTLEMENT**

In furtherance of the Commission's recently reiterated policy (*see* NUREG-1614, "NRC Strategic Plan," Vol. 3, Part III ("Openness") (Aug. 2004)) of effective public outreach and communication as an adjunct to the agency's technical oversight of nuclear reactor and materials safety, there is a benefit in conveying accurate information regarding the agency's licensing review system and its possible outcomes, so that the hearing process operates most fairly and effectively. To that same end, agency interaction with the public outside the adjudicatory process should avoid unnecessarily precipitating or promoting resident opposition, such as by creating the impression of a preordained result relative to the licensing requests.

## **RULES OF PRACTICE: SETTLEMENT**

Presiding officers or licensing boards can often play a critical role as the initiator of discussions among the parties regarding the possibility of reaching a settlement on some or all of the matters in contest. The Commission's decision in *Rockwell International Corp.* (Rocketdyne Division), CLI-90-5, 31 NRC 337 (1990), should not be narrowly read as discouraging those responsible for making a "merits determination" from doing anything other than suggesting that the parties consider settlement, and then passively awaiting their response affirming their willingness to move forward. The practical considerations that generally surround any adjudication include the common concern of one or more of the parties that a willingness even to suggest settlement discussions will be seen as a sign of weakness that will only encourage an opposing party to pursue the litigation. Persistent encouragement toward settlement — including providing the parties with suggestions about possible avenues to explore in such discussions — that is reasonably and responsibly offered can be of significant benefit to the settlement process, both under the Commission's creative *Rockwell* Settlement Judge precedent, and its recent codification in 10 C.F.R. § 2.338.

### **MEMORANDUM AND ORDER (Terminating Proceeding in Aftermath of Settlement Agreement)**

This proceeding was initiated by a number of residents of the Quakertown, Pennsylvania area who were opposed to the licensing by the NRC Staff and the operation by CFC Logistics of an irradiator housed in the Company's nearby food warehouse. That equipment is designed to operate underwater, employing cobalt-60 sources to irradiate food and other materials for purposes of destroying organisms that might cause spoilage of those products. The irradiator has been functioning in that mode for some time, under the license issued by the NRC Staff subject to the outcome of this proceeding.<sup>1</sup>

Our unpublished June 28, 2004 Memorandum and Order anticipated this litigation might be settled as a result of the intensive negotiations then being conducted by our Licensing Board Panel colleague Paul Abramson, who at our request for a Settlement Judge had been appointed to serve in that capacity. On the first page of that order, we alerted all those Petitioners<sup>2</sup> "who have not been

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<sup>1</sup> See LBP-03-16, 58 NRC 136, 137 (2003), denying the residents' motion to stay the effectiveness of the license.

<sup>2</sup> For reasons we explained in that same Order (at 3 nn.3-4 and accompanying text), only a few Petitioners (those who lived closest to the facility) had been formally admitted into the proceeding as Intervenors, for we anticipated that the others could participate through them.

directly involved in the negotiations” as to “the procedures that will be followed to obtain their approval — or to allow them to pursue their disapproval — if a settlement is indeed reached by the negotiators.” To that end, we instructed their counsel (Order at 5) to provide all Petitioners an update that included a copy of our order. That step was taken for the express purpose of putting Petitioners “on notice that, if a settlement is reached, it is our intent to allocate to them a relatively short time thereafter to indicate their approval or disapproval thereof” (*ibid.*, uppercase and emphasis deleted).

There have been a number of developments since then, including the endorsement of a Settlement Agreement by some of the participants and the determination by others not to pursue their opposition. In this Memorandum and Order, we address those developments and their consequences, which include today’s dismissal of all the remaining Petitioners and the formal termination of the proceeding.

#### **A. Settlement Approval and Followup Framework**

The settlement process eventually yielded a settlement agreement, dated August 23, 2004, between the Company and certain individuals. When that agreement came before us for approval, we issued a decision (LBP-04-24, 60 NRC 475 (2004)) that:

- (1) approved the Settlement Agreement (60 NRC at 481-83);<sup>3</sup>
- (2) established a procedural framework for possible further proceedings involving nonsettling Petitioners (60 NRC at 484-86, 489-90); and
- (3) dismissed one nonsettled substantive issue (financial assurance) from further consideration (60 NRC at 491-95).

As to the other substantive “areas of concern” that we had previously ruled would be proper subjects of an evidentiary hearing (*see* LBP-03-20, 58 NRC 311, 329-33 (2003)), we set out on November 4 a detailed framework for how and when the merits of such issues were to be addressed by any Petitioners who wanted to pursue them. *See* 60 NRC at 489-90, 495 n.43, 496-97, and Appendices C through F.

Under the procedural framework we established (*see* #2, above), those Petitioners who had not participated in the settlement negotiations, and thus had

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<sup>3</sup>The entire agreement is reprinted in Appendix A to LBP-04-24, 60 NRC at 499-504. As we summarized its key provisions, they provided the facility opponents with two principal features they wanted installed at the facility: (1) “a *backup generator* to provide a continuous power supply for the pump that drives the air flow through the chamber containing the cobalt-60”; and (2) “a *light-beam trip-switch* to trigger an audible and visual alarm if a cask containing a replacement cobalt source is positioned so that it will traverse over the existing sources.” 60 NRC at 482 (emphasis in original).

not signed the Settlement Agreement, were (having been alerted in early July to become conversant with the matter) simply to notify the Presiding Officer by November 18, through counsel, as to whether they either:

- (1) supported the settlement and would *withdraw* from the litigation, or
- (2) objected to the settlement and would *continue* with the litigation.

60 NRC at 484-85, 495-96. *Those not heard from were to have their petitions dismissed for nonprosecution. Id.* at 484, 496.

Our November decision also dealt with the question — previously left open (*see* note 2, above) — of the various Petitioners’ “standing” to participate. We there held that any who lived within  $\frac{3}{4}$  of a mile from the facility would be presumed to have standing by virtue of their proximity (*id.* at 486-88). Those who lived farther away (i.e., outside the foregoing  $\frac{3}{4}$  mile “presumptive standing” zone) were given until December 2 to make a factual demonstration to establish their standing (*id.* at 489, 496).

We made it clear that “[i]f it turns out that no Petitioner has both the interest and the standing to proceed, . . . this matter will be dismissed.” *Id.* at 496. With that in mind, we had said at the outset (*id.* at 478) that “[d]epending on the situations of [the] remaining participants, and the choices they make, the future course of the proceeding can vary widely — ranging from withdrawal of the litigation altogether, to an evidentiary presentation on the merits of particular concerns.”

## **B. Nature and Consequences of Responses**

Responses to our November 4 ruling were sparse. A small number of Petitioners indicated that they support the settlement. More important for present purposes, no Petitioners came forward in the time specified to say that they oppose the settlement and want to continue with the litigation.<sup>4</sup>

With both the November 18 and December 2 filing dates having come and gone,<sup>5</sup> it is now appropriate to take the step foreordained in our November 4

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<sup>4</sup>On November 18, Petitioners’ counsel advised that, of the few Petitioners he had heard from, all were withdrawing but one, whose intentions were left in doubt. On November 22, Petitioners’ counsel submitted a “party list” but, in response to our inquiry, explained on November 24 that he had had no word from any Petitioners who were seeking to proceed. As it turned out, the “party list” largely coincided with those who supported the settlement. One person was mentioned in counsel’s communications as possibly wanting to continue, but she too did not file with us by November 18 any indication that she indeed wanted to continue; even had she done so, she would (because she lives outside the  $\frac{3}{4}$ -mile presumptive-standing zone) have had to file with us by December 2 a demonstration as to her standing, a step she also did not take.

<sup>5</sup>We note that neither were any responses (belatedly) received after those dates.

Order and *dismiss for nonprosecution* the pending petitions of all those who did *not* respond within those timeframes, as they were obligated to do if they were desirous of continuing this litigation.<sup>6</sup> This step leaves no one remaining as an active litigant opposing the facility, and thus the license issued by the NRC Staff (*see* note 1, above, and accompanying text) will remain in force.

### C. Participants' Contributions

In thus terminating the proceeding, we think it appropriate to take note of the special efforts of a number of Petitioners and other concerned residents that led first to the challenge to the facility's being licensed, and later to the success of the settlement process (suggested by the Presiding Officer<sup>7</sup>) and to the adoption of the Settlement Agreement (facilitated by Judge Abramson). A number of those community leaders — who had previously put significant effort into the intellectual development of, and the financial support for, positions, documents, and arguments opposing the facility — participated in a series of meetings at which, Judge Abramson advises, their opposition position was tenaciously advanced. That the Settlement Agreement was eventually endorsed by the Intervenor who live closer to the site than any other Petitioners, and by an individual whose dedication was manifested by his willingness to support the community's effort financially, provides a testament to the settlement process itself and to the legitimacy of the outcome it yielded.

The Company also deserves credit for its participation in the settlement process. Believing that it had a strong case that could survive the formal test of litigation

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<sup>6</sup>In dismissing so many Petitioners for nonprosecution, we are not being critical of them for not responding within the assigned time. Nor are we making any assumptions about the position(s) they now hold about the licensing of the CFC facility. To the contrary, we had anticipated that some might *no longer be opposed* but not want to actively support the settlement (60 NRC at 484), while others might *remain opposed* but find that it was not worth the effort, or that they lacked the wherewithal, to continue the litigation against the facility (June 28 Order at 6-7). Whether it was one of those reasons, or some other one, that led different Petitioners not to respond is not of significance to the outcome now reached.

<sup>7</sup>*See* Aug. 7, 2003 Tr. at 84-85, noting informal off-the-record discussion regarding settlement; LBP-03-20, 58 NRC at 336, formally indicating a desire to explore the possibility of a settlement between the parties; and Dec. 11, 2003 prehearing conference Tr. at 415-24, elaborating on settlement theories and possibilities.

After the Settlement Judge was appointed, we continued to encourage the parties to avail themselves of the opportunity thus presented to them. *See* March 23, 2004 Tr. at 495-96, 528, referring to “a path to settlement that serves the needs of the citizens to be assured that . . . this facility in its present condition or a modified condition is not a threat to them . . .”; and our unpublished May 28, 2004 Memorandum and Order at 4 n.7, “again encourag[ing] each of the parties,” prior to the first joint meeting with Judge Abramson, “to look for the advantages settlement might confer upon it, compared to the less desirable outcomes that might emerge from pursuing this litigation.”



(*see* reference in our unpublished March 15, 2004 Order, at 1), it nonetheless saw the value of informally listening to the concerns of its neighbors and to sharing with them additional information about the facility. Judge Abramson's sense, as now conveyed to us, is that the Company's approach, including its willingness to make facility changes it did not believe were essential, and to give the Petitioners further information regarding the facility and its operation, provided those who signed the Settlement Agreement the reassurance they needed to withdraw their opposition.

As may thus be seen, and as we noted in the November decision, the Commission's longstanding

policy of encouraging settlement [*see* 10 C.F.R. § 2.759 (former Rules) and § 2.338 (current Rules)] not only can lead to reducing the costs and burdens of litigation, but can also bring more satisfying outcomes than those produced by litigation, allowing both sides to a controversy to reconcile their *philosophical* differences by reaching mutually agreeable *practical* resolutions [*see* note 3 and this Section C, above]. Unlike litigation, which can leave underlying disputes among the parties festering even after a decision producing "winners" and "losers" is rendered by an adjudicator, settlement produces a result shaped by, and acceptable to, the parties themselves . . . ], and is thus more likely to yield a] harmonious future [for] all involved.<sup>8</sup>

LBP-04-24, 60 NRC at 483.

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<sup>8</sup>From the perspective of this Presiding Officer, there are also two lessons that can be learned from this proceeding. The first is the importance — as the Commission recently has reiterated (*see* NUREG-1614, "NRC Strategic Plan," Vol. 3, Part III ("Openness") (Aug. 2004)) — of effective public outreach and communication as an adjunct to the agency's technical oversight of nuclear reactor and materials safety. In this instance, the agency's lack of public notice of the proposed CFC licensing action at the outset, in conjunction with its public interactions outside the adjudicatory process that apparently provided the impression there was a preordained result relative to the CFC licensing request, may well have had the effect of precipitating or promoting resident opposition (*see* 58 NRC at 138 n.4 and accompanying text, 139 nn.6-7 and accompanying text, and 148 n.19 and accompanying text). The hearing process established under the Atomic Energy Act is a vehicle to permit members of the public to seek a resolution of their concerns about the health, safety, and environmental impacts of a proposed licensing action, and that process operates most fairly and effectively when those who seek to utilize it have the benefit of accurate information regarding the agency's licensing review system and its possible outcomes.

Also apparent from this proceeding is the critical role that can often be played by a Presiding Officer or Licensing Board as the initiator of discussions among the parties regarding the possibility of reaching a settlement on some or all of the matters in contest. To be sure, the Commission's decision in *Rockwell International Corp.* (Rocketdyne Division), CLI-90-5, 31 NRC 337 (1990), might have been read as discouraging those responsible for making a "merits determination" from doing anything other than suggesting that the parties consider settlement and then passively awaiting their response

(*Continued*)

#### D. Conclusion

We can summarize the proceeding's termination as follows. All the Petitioners who came before us (both admitted Intervenors and potential ones) have taken one of the steps listed below:

- (1) signed the Settlement Agreement;
- (2) signed a statement indicating support for that Agreement; or
- (3) elected, through inaction and for whatever reason, not to pursue any further the petition and the "areas of concern" contained therein.

Accordingly, all the petitions of those in the third category are DISMISSED FOR NONPROSECUTION, and — with no facility opponents remaining active — this litigation against the issuance of the NRC license and the operation of the facility thereunder is thus TERMINATED.

As a result, the underlying issues addressed by the previously approved Settlement Agreement — recommended to us by Judge Abramson, as the product of extensive negotiations which he guided — will not be litigated before us, nor will any other "areas of concern" submitted by the Petitioners and previously designated by us as appropriate subjects of an evidentiary hearing. Because the settlement process served the public interest, we repeat (*see* 60 NRC at 497) that "[t]hose who participated in the negotiations have our appreciation for working diligently to resolve the controversy between the Company and the community in which it is located." *See also* Section C, above.

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Pursuant to 10 C.F.R. § 2.1251(a), this Order terminating the proceeding will constitute the FINAL ACTION of the Commission within thirty (30) 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.

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affirming their willingness to move forward. But this interpretation seemed too narrow in light of the practical considerations that generally surround any adjudication, in particular the common concern of one or more of the parties that a willingness even to suggest settlement discussions will be seen as a sign of weakness that will only encourage an opposing party to pursue the litigation. In this instance, our persistence in raising the question of settlement, and in providing the parties with suggestions about possible avenues to explore in such discussions (*see* note 7, above), appears to have been an important factor in convincing CFC and a number of interested members of the local community to sit down and, utilizing Judge Abramson's good offices, to discuss — and ultimately to address — those individuals' concerns in a satisfactory way. As this case demonstrates, presiding officer encouragement toward settlement that is reasonably and responsibly offered can be of significant benefit to the settlement process, both under the Commission's creative *Rockwell* Settlement Judge precedent (which applied to this case), and its recent codification in 10 C.F.R. § 2.338 (which will govern future cases).

Recognizing that (because the termination is for nonprosecution) we had before us in bringing an end to the proceeding no participant filings of an adversarial nature, we nonetheless hereby advise all participants, pursuant to 10 C.F.R. § 2.1253, that WITHIN FIFTEEN (15) DAYS after service of this termination 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). 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. § 2.1253.

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 thereto shall conform to the requirements of 10 C.F.R. § 2.786(b)(2)-(3).

It is so ORDERED.

BY THE PRESIDING OFFICER

Michael C. Farrar  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
January 11, 2005

Copies of this Order are being sent by Internet e-mail transmission to counsel for (1) CFC Logistics, (2) Intervenors and Petitioners, and (3) the NRC Staff.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**E. Roy Hawkens**, Chairman  
**Alan S. Rosenthal**  
**Dr. Peter S. Lam**

**In the Matter of**

**Docket Nos. 30-5980-EA  
30-5982-EA  
(ASLBP No. 05-835-01-EA)  
(Materials License Suspension)**

**SAFETY LIGHT CORPORATION  
(Bloomsburg, Pennsylvania Site)**

**January 24, 2005**

The NRC Staff issued an order that suspended, effective immediately, two materials licenses held by Safety Light Corporation. The Staff made the order effective immediately based on the alternative conclusions that (1) Safety Light willfully violated a licensing condition, and (2) Safety Light's violation implicated significant health and safety concerns. In this proceeding, Safety Light moved to set aside the "effective immediately" aspect of the order. The Board denied Safety Light's motion, finding that adequate evidence supported the conclusion that a willful violation occurred.

**ENFORCEMENT ACTIONS: LICENSEE MAY MOVE TO  
SET ASIDE "EFFECTIVE IMMEDIATELY" ASPECT OF  
ENFORCEMENT ORDER**

A licensee may challenge the "effective immediately" aspect of an enforcement order by moving to set it aside on the ground that the order is "not based on adequate evidence but on mere suspicion, unfounded allegations, or error" (10

C.F.R. § 2.202(c)(2)(i)). The motion must “state with particularity the reasons why the order is not based on adequate evidence and must be accompanied by affidavits or other evidence relied on” (*id.*)

**ENFORCEMENT ACTIONS: IMMEDIATE EFFECTIVENESS  
REVIEW (TWO-PART TEST APPLYING “ADEQUATE EVIDENCE”  
STANDARD)**

When an immediately effective enforcement order is challenged, the Staff must satisfy a two-part test: it must demonstrate that adequate evidence supports a conclusion that (1) the licensee violated a Commission requirement (10 C.F.R. § 2.202(a)(1)), *and* (2) the violation was “willful,” *or* the violation poses a risk to “the public health, safety, or interest” that requires immediate action (*id.* § 2.202(a)(5)).

**ENFORCEMENT ACTIONS: IMMEDIATE EFFECTIVENESS  
REVIEW (DEFERENTIAL “ADEQUATE EVIDENCE” STANDARD)**

The “adequate evidence” standard is not onerous. It consists of more than uncorroborated suspicion or accusation, but it does not rise to the level of preponderance of the evidence. Adequate evidence exists “when the facts and circumstances within the NRC Staff’s knowledge, or which it has reasonably trustworthy information, are sufficient to warrant a person of reasonable caution to believe that the charges specified in the order are true” (57 Fed. Reg. 20,194, 20,196 (May 12, 1992)). Application of this nonstringent evidentiary standard in the context of immediately effective orders “strikes a reasonable balance between the Commission’s ability to protect the public health, safety, or interest . . . while providing affected parties with a measure of protection against arbitrary enforcement action by the Commission” (*id.*).

**ENFORCEMENT ACTIONS: IMMEDIATE EFFECTIVENESS  
REVIEW (MEANING OF “WILLFUL” VIOLATION, 10 C.F.R. § 2.202)**

The term “willful” in section 2.202 does not contain a scienter requirement such that the Staff, to sustain an immediately effective order, must show some evidence of wrongful purpose. Rather, a licensee willfully violates a Commission requirement within the meaning of section 2.202 if — regardless of culpable purpose — it: (1) intentionally performs an act that it knows is prohibited (willful commission), or intentionally fails to perform an act that it knows is required (willful omission); or (2) engages in conduct that may be characterized as careless disregard of requirements that results in a violation of such requirements.

**MEMORANDUM AND ORDER**  
**(Denial of Motion To Set Aside Immediate Effectiveness**  
**of Order Suspending License)**

On December 10, 2004, the Nuclear Regulatory Commission (NRC or Commission) Staff issued an order that suspended, effective immediately, two materials licenses held by Safety Light Corporation. The Staff made the suspension order immediately effective based on the alternative conclusions that (1) in willful violation of licensing conditions, Safety Light failed to make prescribed monthly payments to a decommissioning trust fund, and (2) Safety Light's violation of a licensing condition gave rise to significant health and safety concerns. On December 29, 2004, Safety Light moved to set aside the "effective immediately" aspect of the suspension order. The Staff opposed the motion and, on January 13, 2005, the parties presented argument to this Board. Because we find that adequate evidence supports the Staff's conclusion that a willful violation occurred, we deny Safety Light's motion.<sup>1</sup>

**I. BACKGROUND**

**A. The Relevant Licensing Conditions**

Safety Light is a small company in Bloomsburg, Pennsylvania, that employs about thirty individuals. It holds two byproduct materials licenses issued pursuant to 10 C.F.R. Part 30. License Number 37-00030-02 authorizes Safety Light to characterize and to decommission certain contaminated portions of its facility, and License Number 37-00030-08 authorizes it to manufacture self-luminous signs that utilize tritium, as well as targets containing tritium for neutron-generating devices. Both licenses were last renewed on December 28, 1999, for 5-year terms that were scheduled to expire on December 31, 2004.<sup>2</sup>

Ordinarily, the holder of a materials license must — as a condition of licensing — certify that it has provided financial assurance for the estimated cost of

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<sup>1</sup>On December 29, 2004, Safety Light also requested a hearing to challenge the suspension order. Proceedings on that challenge are ongoing. Here, we resolve only Safety Light's motion to set aside the "effective immediately" aspect of the suspension order. *See* 10 C.F.R. § 2.202(c)(2)(i).

<sup>2</sup>On April 22, 2004, Safety Light applied to renew both licenses. On December 10, 2004, the Staff denied the license-renewal requests because Safety Light (1) failed to comply with substantive provisions of its licenses, (2) could not comply with the decommissioning funding assurance requirements in 10 C.F.R. §§ 30.32 and 30.35, and (3) failed to demonstrate that an exemption from the decommissioning funding assurance requirements was warranted pursuant to 10 C.F.R. § 30.11. On December 30, 2004, Safety Light demanded a hearing to challenge the denial of its license-renewal requests pursuant to 10 C.F.R. § 2.103(b).

decommissioning its facility by (1) prepayment of monies into a segregated fund, or (2) a surety, insurance, or other guarantee method. *See* 10 C.F.R. §§ 30.32 and 30.35. However, the Commission may exempt a license applicant from these decommissioning funding assurance requirements if it determines that an exemption is “authorized by law and will not endanger life or property or the common defense and security and [is] otherwise in the public interest.” *Id.* § 30.11(a).

Safety Light lacked the financial resources to satisfy the decommissioning funding assurance requirements for its facility, whose decommissioning cost is estimated as ranging from \$50 million to \$120 million. *See* Encl. 1 to NRC Staff Notice of Denial of License Renewal (Dec. 10, 2004). Therefore, in 1999, Safety Light requested a section 30.11 exemption from the requirements of section 30.35, which the Commission granted. As a condition of remaining exempt from the regulatory funding requirement, however, Safety Light’s licenses required it to make the following periodic payments to a decommissioning trust fund: \$7000 per month in 2000, \$8000 per month in 2001 and 2002, and \$9000 per month in 2003 and 2004 — for a total of \$492,000. *See* License Number 37-00030-02, Condition 16; License Number 37-00030-08 (Condition 20.A). The licenses specified that *any* failure by Safety Light to comply with the monthly payment schedule would result in immediate termination of its exemption which, in turn, would cause Safety Light to be in violation of the regulatory decommissioning funding assurance requirements. *Ibid.* The licenses stated in this regard: “This exemption is valid until [December 31, 2004] or *the date of any failure to comply with this license condition.*” *Ibid.* (emphasis added).

#### **B. Safety Light’s Failure To Comply With the Payment Schedule Prescribed in Its Licenses**

In 2000, Safety Light complied with the payment schedule prescribed in its licenses, depositing \$7000 per month in the decommissioning trust fund. However, on two occasions in 2001 to 2002, Safety Light failed — due to “[in]sufficient funds” caused by a “difficult business environment” — to make the required monthly deposits of \$8000. *See* Affidavit of Safety Light Vice President William Lynch at 2-3 (Dec. 29, 2004) (Exh. A to Safety Light Motion To Set Aside Immediate Effectiveness of Order Suspending License (Dec. 29, 2004)) [hereinafter Lynch Affidavit]. In January and February of 2003, Safety Light made the two \$8000 payments that were in arrears, but failed to make the \$9000 payments that were due those months. *Id.* at 3. During the 11-month period from January to November of 2003, Safety Light failed to make nine payments, creating a fund shortage of \$81,000. *Ibid.*

Safety Light Vice President William Lynch is the company official who — assisted by Safety Light Plant Manager Larry Harmon — decided, due to

inadequate company resources, not to make the prescribed payments to the decommissioning trust fund.<sup>3</sup> Instead, to avoid going out of business, Mr. Lynch used the available money to pay the salaries of company employees and the bills of suppliers. *See* Lynch Affidavit at 3. As Mr. Lynch explained, “if the business had failed, [Safety Light] would not have been able to make any further payments into the decommissioning trust fund. It was necessary to sustain the business during the downturn if [Safety Light] was going to be able to make all of the required payments.” *Id.* at 4. During this time, Safety Light “la[id] off personnel, cut the salaries of management employees, and limit[ed] other expenditures to the minimum necessary to allow the business to continue during this difficult period.” *Id.* at 3.

Mr. Lynch elected not to mention Safety Light’s violation of its licensing condition to the NRC, because Safety Light “intended to make the payments as soon as [it] had the necessary resources” and any “lack of payments from [Safety Light] were reflected in the monthly statements that [Safety Light] and the NRC received from the decommissioning trust fund trustee.” Lynch Affidavit at 4.

In November 2003, Safety Light was scheduled to have radioactive waste removed from the facility; however, the planned waste removal was cancelled because it was determined that the trust fund lacked sufficient money to pay for the removal. On November 20, 2003, a member of the NRC Staff, Marie Miller, met with Mr. Harmon to discuss, *inter alia*, the shortage of money in the trust fund. Although Mr. Harmon knew that Safety Light repeatedly had failed to comply with the licensing payment schedule and was in arrears by \$81,000, he did not then mention this to Ms. Miller. Rather, he first sought permission from Mr. Lynch to make this disclosure. The next day, with Mr. Lynch’s permission, Mr. Harmon called Ms. Miller and told her about the missed payments, which, in turn, triggered a Staff investigation. *See* Interview of Larry Harmon at 9-11, 14-17 (Dec. 16, 2003) (Exh. 7 to Attachment A to NRC Staff Response to Safety Light Motion To Set Aside the Immediate Effectiveness of Order Suspending License (Jan. 4, 2005)).

### **C. The Staff’s Issuance of an Immediately Effective Suspension Order**

The NRC Office of Investigations (OI) conducted an investigation, which included interviewing under oath the Safety Light President (Mr. White), Vice

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<sup>3</sup>The President of Safety Light, Charles White, is not involved in the company’s day-to-day operations. Mr. White states that, unlike Mr. Lynch and Mr. Harmon, he did not know that licensing conditions required monthly payments to a decommissioning trust fund, nor did he know that Safety Light repeatedly failed to comply with the licensing payment schedule. *See* Interview of Charles White at 5, 10, 13-14 (Feb. 13, 2004) (Exh. 8 to Attachment A to NRC Staff Response to Safety Light Motion To Set Aside the Immediate Effectiveness of Order Suspending License (Jan. 4, 2005)).



President (Mr. Lynch), and Plant Manager (Mr. Harmon). *See* OI Report 1-2003-056 (Mar. 9, 2004) (Attachment A to NRC Staff Response to Safety Light Motion To Set Aside the Immediate Effectiveness of Order Suspending License (Jan. 4, 2005)). The OI Report concluded that Safety Light officials (Mr. Lynch and Mr. Harmon) “deliberately violated a condition of [Safety Light’s] license by failing to make the required monthly deposits to the NRC trust fund (missed 13 payments over a three year period).” OI Report at 1, 12.

By letter dated July 1, 2004, the NRC advised Safety Light President, Mr. White, of the conclusion reached in the OI Report, and it invited him to attend a predecisional enforcement conference on July 20, 2004. *See* Letter from George Pangburn to C. Richter White (July 1, 2004) (Attachment B to NRC Staff Response to Safety Light Motion To Set Aside the Immediate Effectiveness of Order Suspending License (Jan. 4, 2005)). The purpose of the conference was to allow Safety Light officials to provide their “perspective[s] on these matters and any other information that you believe the NRC should take into consideration” in determining whether a violation occurred and whether enforcement action was warranted. *Ibid.* Mr. White, Mr. Lynch, and Mr. Harmon participated in the conference. *See* Transcript of Predecisional Enforcement Conference (July 20, 2004) (Attachment C to NRC Staff Response to Safety Light Motion To Set Aside the Immediate Effectiveness of Order Suspending License (Jan. 4, 2005)).

On December 10, 2004, the NRC issued an Order Suspending License (Effective Immediately). The NRC explained (Order at 5-6):

[T]he Licensee admitted knowledge of the requirement to make payments to the trust fund, yet failed to do so. The obligation to make the specified payments set forth in the license conditions is unqualified and is not subject to the state of [Safety Light’s] business conditions, and was material to the granting of an exemption to the Licensee in connection with the renewal of its licenses in 1999. The Licensee’s deliberate failure to make the required payments to the trust fund . . . voided the exemption from the financial assurance requirements of 10 C.F.R. § 30.35, and placed the Licensee in continued violation of these license conditions and 10 C.F.R. § 30.35. This deliberate failure by the Licensee has significant health and safety implications in that these regulatory requirements are intended to ensure the availability of adequate funds for characterization, packaging, and disposal of radioactive waste from the Licensee’s site.

Based on the Licensee’s willful failure to make the required scheduled payments into the decommissioning trust fund as required by its licenses, and the resultant implication for public health and safety, I lack the requisite reasonable assurance that the Licensee’s current operations can be conducted under License Nos. 37-00030-02 and 37-00030-08 in compliance with the Commission’s requirements and that the health and safety of the public, including the Licensee’s employees, will be protected.

Thus, the NRC made the suspension order effective immediately based on its alternative conclusions that (1) Safety Light willfully violated licensing conditions, and (2) this violation has significant health and safety implications that require immediate action.

Safety Light moves this Board to set aside the immediately effective aspect of the order.

## II. ANALYSIS

Safety Light contends that the immediate effectiveness of the suspension order must be set aside, because the NRC Staff cannot show — as it must under 10 C.F.R. § 2.202(a)(5) — that adequate evidence supports a conclusion that the violation was “willful” or that immediate action was required to protect the “public health, safety, or interest” (*ibid.*). We are constrained to reject Safety Light’s argument. We find that adequate evidence supports the conclusion that Safety Light willfully violated its license conditions, and that the Staff thus acted within the bounds of its regulatory authority in making the order immediately effective.<sup>4</sup>

### A. Immediately Effective Orders Are Reviewed Pursuant to a Two-Part Test That Applies the Deferential “Adequate Evidence” Standard

Pursuant to 10 C.F.R. § 2.202(a), when the Commission finds evidence of a license violation, it may issue an order that suspends or revokes the license. Additionally, if the Commission “finds that the public health, safety, or interest so requires or that the violation or conduct causing the violation is willful,” it

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<sup>4</sup> Because we find that adequate evidence supports a conclusion that Safety Light willfully violated license conditions, we need not, and do not, resolve whether the Staff’s alternative ground for making the suspension order immediately effective (i.e., that Safety Light’s violations posed a risk to public health and safety that required immediate action) is supported by adequate evidence. We nevertheless observe that, on November 4, 2004, the Commission completed a 4-month integrated safety inspection of Safety Light that included reviews of site conditions, site security, licensed activities, records, radioactive material storage, radioactive waste management, and dose assessments. The Inspection Report concluded that Safety Light was adequately complying with Commission requirements, which seemingly undercuts a determination that the violation in this case posed a threat to public safety or health necessitating immediate action. *See* Inspection Report (Nov. 4, 2004) (Exh. D to Safety Light Motion To Set Aside Immediate Effectiveness of Order Suspending License (Dec. 29, 2004)).

may make the license suspension or revocation “immediately effective pending further order” (*id.* § 2.202(a)(5)).<sup>5</sup>

In response to such an order, a licensee may — in addition to demanding a hearing on the merits of the order (10 C.F.R. § 2.202(c)) — move the presiding officer to set aside the immediate effectiveness of the order and demand a hearing (*id.* § 2.202(c)(1) & (c)(2)(i)). In its motion to set aside the immediate effectiveness of the order, the licensee must aver that the order is “not based on adequate evidence but on mere suspicion, unfounded allegations, or error” (*id.* § 2.202(c)(2)(i)). Moreover, the motion “must state with particularity the reasons why the order is not based on adequate evidence and must be accompanied by affidavits or other evidence relied on” (*ibid.*).

The “adequate evidence” standard the Commission must satisfy to sustain an immediately effective order is not onerous. Although adequate evidence consists of “more than uncorroborated suspicion or accusation,” it does not rise to the level of preponderance of the evidence. *See United Evaluation Services, Inc.* (Beachwood, New Jersey), LBP-02-13, 55 NRC 351, 354 (2002) (quoting 57 Fed. Reg. 20,194, 20,196 (May 12, 1992)). Adequate evidence exists “when facts and circumstances within the NRC Staff’s knowledge, or which it has reasonably trustworthy information, are sufficient to warrant a person of reasonable caution to believe that the charges specified in the order are true.” *Ibid.*; *accord Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-94-6, 39 NRC 285, 301 (1994).

The Commission has likened the “adequate evidence” standard to the “probable cause” standard in the criminal context, which must be satisfied, for example, to justify an arrest or the issuance of a warrant. *Advanced Medical Systems, Inc.*, CLI-94-6, 39 NRC at 301. Application of this nonstringent evidentiary standard in the context of immediately effective orders “strikes a reasonable balance between the Commission’s ability to protect the public health, safety, or interest on the basis of reasonably trustworthy information while still providing affected parties with a measure of protection against arbitrary enforcement action by the Commission.” *Id.* at 301-02 (quoting 57 Fed. Reg. at 20,196).

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<sup>5</sup> It is well established that a government agency may issue an immediately effective order when necessary to protect public health and safety. *See* 57 Fed. Reg. 20,194, 20,195-96 (May 12, 1992) (citing cases). Willful violation of a Commission requirement likewise provides a basis for issuing an immediately effective order, because the NRC relies on the voluntary cooperation and obedience of “individuals involved in licensed activities to ensure compliance with NRC requirements. When an individual willfully violates Commission requirements, that reliance is undermined.” *Id.* at 20,195. A willful violation by a nuclear licensee may cause the Commission to lose confidence in the licensee’s willingness or ability to operate in compliance with licensing or regulatory requirements which, in turn, may warrant an immediately effective order to “restore reasonable assurance that the public health, safety, and interest [will] be protected.” *Ibid.*

In sum, when an immediate effectiveness determination is challenged, the Staff must satisfy a two-part test: it must demonstrate that adequate evidence — i.e., reliable, probative, and substantial (but not preponderant) evidence — supports a conclusion that (1) the licensee violated a Commission requirement (10 C.F.R. § 2.202(a)(1)), and (2) the violation was “willful,” or the violation poses a risk to “the public health, safety, or interest” that requires immediate action (*id.* § 2.202(a)(5)).

Here, there is no dispute that adequate evidence supports the conclusion that Safety Light violated a Commission requirement. Safety Light’s licenses contained a condition that imposed a mandatory and unqualified requirement on Safety Light to make monthly payments to the decommissioning trust fund. During Safety Light’s 5-year license term, it failed — in violation of these license conditions — to make at least eleven of the sixty scheduled monthly payments. *See* Lynch Affidavit at 3.

Safety Light insists, however, that its violations were not “willful” within the meaning of section 2.202(a)(5) and, accordingly, the immediate effective order cannot stand. For the reasons discussed below, we reject this claim.

**B. Safety Light’s Violations Were “Willful” Within the Meaning of Section 2.202(a)(5)**

Safety Light invites us to construe the term “willful” in section 2.202(a)(5) to contain a scienter requirement such that the Staff, to sustain an immediately effective order, must show some evidence of a wrongful purpose. So construed, argues Safety Light, its violations were not willful, because it never intended to flout or ignore its license conditions; rather, it simply lacked the funds to make the required payments to the trust fund. As Safety Light explains, if it had made the scheduled payments as required by the license conditions, it would have gone out of business because it would not have had sufficient funds to pay employees and suppliers. Safety Light decided to stay in business at the expense of violating its license conditions, and it “fully intended to make the payments as soon as [it] had the necessary resources” (Lynch Affidavit at 4), which it in fact has done.<sup>6</sup>

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<sup>6</sup> Safety Light states that the business climate for marketing and selling its products has improved and, starting in December 2003, Safety Light was “able to make a payment on the amount in arrears, and during 2004 [Safety Light] has not only been able to make the required payments but also has paid the amounts that had been missed. The final payment of \$36,949.61 was sent to the fund trustee on December 29, 2004.” Lynch Affidavit at 3.

Safety Light concedes (Lynch Affidavit at 4) that it was remiss in not promptly discussing with the NRC Staff its failure to comply with the payment schedule mandated by its licenses (*supra* p. 57), and we emphatically agree that it was. The NRC Staff rightfully expects licensees to be proactive in dealing with the implications of violations of Commission requirements.

The NRC Staff opposes Safety Light’s effort to construe “willful” as containing a scienter requirement. It argues that a licensee willfully violates a Commission requirement if the licensee is aware of the requirement and nevertheless consciously acts in derogation of that requirement. So construed, contends the Staff, the record shows Safety Light willfully violated its license conditions, because Safety Light management knew its licenses required it to make monthly deposits into the decommissioning trust fund, and Safety Light consciously decided not to make those payments.

We agree with the Staff that the term “willful” in section 2.202(a)(5) does not contain a scienter requirement. This conclusion is buttressed by the regulatory history of section 2.202 and Commission precedent.

In 1992, when the Commission promulgated revisions to section 2.202, it stated: “[A]llowing an order to become immediately effective on the ground of willfulness is consistent with section 9 of the Administrative Procedure Act [APA], 5 U.S.C. 558. Under that provision, orders may be immediately effective — i.e., advance notice of license withdrawal, suspension, revocation or annulment need not be given in cases of willfulness” (57 Fed. Reg. at 20,195). It thus appears that the Commission intended “willful” in section 2.202 to be construed in the same manner that the term “willfulness” is construed in section 558 of the APA.

Notably, in statutes that do not prohibit offenses involving turpitude (and section 558 of the APA is *not* a statute designed to target offenses involving turpitude), the Supreme Court has instructed that the term “willfully” is often used without any implication of scienter. Rather, the term “denotes that which is ‘intentional, or knowing, or voluntary, as distinguished from accidental,’ and . . . it is employed to characterize ‘conduct marked by careless disregard whether or not one has the right so to act.’” *United States v. Illinois Central Railroad Co.*, 303 U.S. 239, 242-43 (1938) (quoting *United States v. Murdock*, 290 U.S. 389, 394 (1933)).

Consistent with this Supreme Court guidance, courts of appeals overwhelmingly have declined to construe “willfulness” in section 558 (and its predecessor, section 1008) of the APA as embodying a scienter requirement. Rather, courts have concluded that an entity willfully violates a requirement if — regardless of culpable purpose — it: (1) intentionally performs an act that it knows is prohibited (willful commission), or intentionally fails to perform an act that it knows is required (willful omission); or (2) engages in conduct that may be characterized as careless disregard of requirements that results in a violation of such requirements.<sup>7</sup> This is the meaning we believe should be attributed to the term “willful” in section 2.202.

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<sup>7</sup> See, e.g., *Lawrence v. Commodity Futures Trading Commission*, 759 F.2d 767, 773 (9th Cir. 1985); *Finer Foods Sales Co., Inc. v. Block*, 708 F.2d 774, 777-78 (D.C. Cir. 1983); *Silverman v. Commodity* (Continued)

Importantly, Commission precedent supports our interpretation. *See Hamlin Testing Laboratories, Inc.*, 2 AEC 423, 428 (1964) (a licensee willfully violated a Commission requirement when it “knew what was required of it under the Commission’s regulations and the terms and conditions of its license, and [failed] to comply therewith”); *X-Ray Engineering Co.*, 1 AEC 553, 555 (1960) (same). *Cf.* 55 Fed. Reg. 12,374, 12,375 (Apr. 3, 1990) (in *Federal Register* notice of proposal to revise regulations to address willful misconduct by unlicensed individuals, Commission states that a “violation is willful if an individual either knew that the conduct was prohibited or showed a careless disregard for whether the conduct was prohibited”).<sup>8</sup>

Having rejected Safety Light’s assertion that the term “willful” contains a scienter requirement, the question then becomes whether adequate evidence supports a conclusion that Safety Light’s violation of its license conditions was willful — i.e., deliberate, intentional, or knowing (as opposed to negligent or accidental). We have no difficulty resolving this question in the affirmative. Safety Light concedes that it was aware that the licenses required monthly deposits into the decommissioning trust fund, and it also concedes that during the license terms, it knowingly failed to make numerous deposits pursuant to the

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*Futures Trading Commission*, 549 F.2d 28, 31 (7th Cir. 1977); *Koden v. Department of Justice*, 564 F.2d 228, 234 (7th Cir. 1977); *George Steinberg & Son, Inc. v. Butz*, 491 F.2d 988, 994 (2d Cir.), *cert. denied*, 419 U.S. 830 (1974); *Cargill, Inc. v. Hardin*, 452 F.2d 1154, 1156, 1173 (8th Cir. 1971); *Goodman v. Benson*, 286 F.2d 896, 900 (7th Cir. 1961); *Eastern Produce Co. v. Benson*, 278 F.2d 606, 609 (3d Cir. 1960).

<sup>8</sup> At oral argument, Safety Light relied on *Babcock & Wilcox Co. v. Occupational Safety and Health Review Commission*, 622 F.2d 1160, 1166 (3d Cir. 1980), to support its position that the term willfulness means “‘defiance or such reckless disregard of consequences as to be equivalent to a knowing, conscious, and deliberate flaunting of [a requirement].’” (quoting *Frank Irey, Jr., Inc. v. Occupational Safety and Health Review Commission*, 519 F.2d 1200, 1207 (3d Cir. 1974), *aff’d en banc*, 519 F.2d 1215 (1975), *aff’d sub nom. Atlas Roofing Co. v. Occupational Safety and Health Review Commission*, 430 U.S. 442 (1977)). However, the analysis in *Babcock & Wilcox Co.* is inapposite. There, the Third Circuit construed the term “willfulness” in the Occupational Safety and Health Act of 1970 pursuant to the legislative history and statutory structure of that Act (622 F.2d at 1165-66); here, we construe the term “willful” in 10 C.F.R. § 2.202 consistent with the meaning of “willfulness” in the APA. Equally important, we construe section 2.202 consistent with Commission precedent.

Moreover, even if we found that *Babcock & Wilcox Co.* were relevant, we would still be inclined to sustain the immediately effective order here, because the Third Circuit in *Babcock & Wilcox Co.* stated that “there is little, if any, difference” between its interpretation of “willfulness” and an interpretation of “willfulness” without a scienter component and defined as “an act done voluntarily, with either an intentional disregard of, or plain indifference to, OSHA requirements.” 622 F.2d at 1167. The Third Circuit explained: “To our way of thinking, an ‘intentional disregard of OSHA requirements’ differs little from an ‘obstinate refusal to comply’; nor is there in context much to distinguish ‘defiance’ from ‘intentional disregard.’ ‘Flaunting the act’ or ‘flouting it,’ as some would say, again carries the same meaning.” *Ibid.*

prescribed payment schedule. *See* Lynch Affidavit at 2-4. Thus, by Safety Light's own concession, its violations were willful. We therefore sustain the immediately effective aspect of the suspension order.

We emphasize that our ruling today is a limited one. The lenient "adequate evidence" standard that we apply in this case is not the standard for determining the ultimate merits of an enforcement order; rather, it is used "only as a preliminary procedural safeguard against the Staff's ordering immediately effective action based on 'clear error, unreliable evidence, or unfounded allegations.'" *Advanced Medical Systems, Inc.*, CLI-94-6, 39 NRC at 302 (*quoting* 57 Fed. Reg. at 202,197). Thus, in finding that adequate evidence supports a conclusion that Safety Light willfully violated a licensing condition, we do not intimate any view on whether, in the totality of circumstances, suspension of Safety Light's license is a reasonable and equitable sanction that fulfills a demonstrable regulatory purpose, nor do we intimate any view on whether the denial of Safety Light's license-renewal request was proper. Those issues are not currently before us (*supra* notes 1 & 2).<sup>9</sup>

### III. CONCLUSION

For the foregoing reasons, we conclude that adequate evidence supports the immediate effectiveness of the Staff's order suspending the two materials licenses held by Safety Light Corporation. Accordingly, Safety Light's motion to set aside the immediate effectiveness of the suspension order is DENIED.

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<sup>9</sup>On January 10, 2005, Safety Light moved for leave to reply to the NRC Staff's opposition to Safety Light's motion to set aside the immediately effective order, and Safety Light accompanied its motion with a Proposed Reply. The Staff opposed Safety Light's motion on January 12, 2005. We grant Safety Light's motion, and we have fully considered the material in its Proposed Reply, which is part of the record.

On January 10, 2005, Safety Light also requested that this Board direct the Staff to make certain records available to Safety Light. On January 12, 2005, the Staff voluntarily made additional records available to Safety Light, and at oral argument on January 13, 2005, Safety Light indicated that the Staff's disclosures rendered Safety Light's request for additional records moot.

This Order constitutes final agency action on immediate effectiveness. *See* 10 C.F.R. § 2.202(c)(2)(i).

THE ATOMIC SAFETY AND  
LICENSING BOARD<sup>10</sup>

E. Roy Hawkens, Chairman  
ADMINISTRATIVE JUDGE

Alan S. Rosenthal  
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
January 24, 2005

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<sup>10</sup> Copies of this Memorandum And Order were sent this date by Internet e-mail to counsel for (1) Licensee Safety Light Corporation and (2) the NRC Staff.



UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Charles Bechhoefer**, Presiding Officer  
**Anthony J. Baratta**, Special Assistant

**In the Matter of**

**Docket No. 40-8027-MLA-4**  
**(ASLBP No. 99-770-09-MLA)**

**SEQUOYAH FUELS CORPORATION**  
**(Gore, Oklahoma Site Decommissioning)**

**January 28, 2005**

**ORDER**  
**(Terminating Proceeding)**

This proceeding concerns Sequoyah Fuels Corporation's (SFC's) proposed amendment to its Source Materials License No. SUB-1010, to decommission SFC's uranium conversion facility located near Gore, Oklahoma. On January 19, 2005, SFC moved for approval of its withdrawal of its license amendment request and for termination of the proceeding. For the reasons set forth, I approve.

As Presiding Officer, I granted the State of Oklahoma's request for a hearing on December 16, 1999, LBP-99-46, 50 NRC 386 (1999), and the Commission affirmed this ruling. CLI-01-2, 53 NRC 9 (2001). In approving Oklahoma's hearing request, I looked at the requirements set forth in 10 C.F.R. Part 40, Appendix A, which, although not explicitly governing the proposed license amendment, served as useful guidance to evaluate the proposal under review.

Subsequently, SFC proposed an alternate plan for site remediation, monitoring, and license termination. The alternate plan also specifically addressed the requirements of 10 C.F.R. Part 40, Appendix A. The NRC Staff stopped its review of the proposed license amendment and decommissioning plan in 2002, after SFC requested another license amendment to classify some waste at the SFC site as

section 11e(2) byproduct material. On December 31, 2002, the Staff advised me that it had suspended processing of the license termination plan pending final decision on the application for byproduct material, and that on December 11, 2002, the Staff approved the application. *See* Letter to Administrative Judges from G.M. Longo, Esq., NRC Staff Counsel, dated December 31, 2002.

SFC filed its reclamation plan for decommissioning the section 11e(2) and other material at the SFC site on January 28, 2003. Oklahoma challenged the legality of the reclassification but the Commission agreed with SFC that the front-end waste qualifies as section 11e(2) material. CLI-03-15, 58 NRC 349 (2003). Oklahoma's request for a hearing on the reclamation plan was denied, and it appealed that decision to the 10th Circuit Court of Appeals.

On November 30, 2004, SFC entered a settlement agreement with Oklahoma (as well as the Cherokee Nation, which had sought a hearing on the alternate plan), and Oklahoma withdrew its appeal to the 10th Circuit. As a result, NRC's reclassification decision became final. Accordingly, SFC wrote the NRC on December 29, 2004 seeking to withdraw the license amendment request associated with the Decommissioning Plan. On January 19, 2005, it filed the instant motion to approve withdrawal of the license amendment request and for termination of this proceeding. SFC advised that the Staff had no objection. ASLBP staff inquired whether Oklahoma had any objection, and Oklahoma advised that it would not be filing an objection to the motion.

SFC asserts that my approval of the withdrawal request is appropriate because withdrawal will not prejudice any party. I agree. SFC's withdrawal request is hereby *approved* and this proceeding is thus *terminated*.

IT IS SO ORDERED.

Charles Bechhoefer, Presiding Officer  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
January 28, 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 Nos. 30-5980-EA  
30-5982-EA  
(Materials Licensing Suspension)**

**SAFETY LIGHT CORPORATION  
(Bloomsburg, Pennsylvania Site)**

**February 22, 2005**

**ORDER**

The Commission is taking the unusual step of exercising its supervisory role over licensing and enforcement proceedings. On January 24, 2005, the Board denied Safety Light's motion to set aside the immediate effectiveness of the Staff's order suspending two materials licenses held by Safety Light because the Board found that adequate evidence supported the Staff's conclusion that a willful violation occurred (LBP-05-2, 61 NRC 53). However, on February 18, 2005, the Board issued an order directing the Staff to investigate claims raised by Safety Light's customers that Safety Light's products are indispensable components of equipment necessary for national defense. The Board also directed the Staff to address how national defense and security concerns apply in the instant matter in light of the Staff's factual assessments of the above claims, assuming *arguendo* that national defense and security concerns are appropriate factors to consider when evaluating the appropriateness of enforcement measures and when evaluating a licensee's exemption request.

In view of the Board's most recent order, the public interest and other issues that have been raised,<sup>1</sup> and the imminence of the evidentiary hearing, we find it appropriate to, and hereby do, lift the immediate effectiveness of the Staff's December 10, 2004 license suspension order.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

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

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<sup>1</sup> We note, for example, Safety Light's claim that it will be forced permanently out of business if its license is not restored prior to the end of February. *See* Safety Light Corporation's Motion To Set Aside Immediate Effectiveness of Order Suspending License (Dec. 29, 2004) at 2, 13.

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. 070-03098-ML**  
**(ASLBP No. 01-790-01-ML)**

**DUKE COGEMA STONE &  
WEBSTER**  
**(Savannah River Mixed Oxide Fuel  
Fabrication Facility)**

**February 2, 2005**

**RULES OF PRACTICE: SUMMARY DISPOSITION**

Pursuant to the provisions of 10 C.F.R. § 2.749, made applicable to Subpart L proceedings by 10 C.F.R. § 2.2, summary disposition is available for all or any matters in a proceeding “if 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.”

**RULES OF PRACTICE: SUMMARY DISPOSITION (BURDEN OF PROOF)**

Summary disposition motions under 10 C.F.R. § 2.749 are analogous to summary judgment motions under Rule 56 of the Federal Rules of Civil Procedure and should be evaluated under the same standards. Under both NRC and federal case law, the party seeking summary disposition bears the burden of showing the absence of a genuine issue of material fact. Because the burden of proof is

on the movant, “the evidence submitted must be construed in favor of the party in opposition thereto, who receives the benefit of any favorable inferences that can be drawn.” *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-17, 39 NRC 359, 361, *aff’d*, CLI-94-11, 40 NRC 55 (1994).

**RULES OF PRACTICE: SUMMARY DISPOSITION (GENUINE DISPUTED ISSUE OF FACT)**

The party opposing summary disposition must set forth specific facts showing that there is a genuine issue. To be considered genuine, “the factual record, considered in its entirety, must be enough in doubt so that there is a reason to hold a hearing to resolve the issue.” *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), LBP-83-46, 18 NRC 218, 223 (1983).

**RULES OF PRACTICE: SUMMARY DISPOSITION (GENUINE DISPUTED ISSUE OF FACT)**

If the nonmoving party fails to oppose any material fact properly set out in the moving party’s statement of material facts that accompanies the summary disposition motion, then that fact will be deemed admitted. After the moving party makes a proper showing for summary disposition, and the nonmoving party does not establish a genuine issue of material fact, then the Board may summarily dispose of the contention on the basis of the pleadings.

**RULES OF PRACTICE: SUMMARY DISPOSITION (EXPERT OPINION)**

Federal case law makes it clear that under Rule 56, summary judgment is not appropriate where it would require a determination of the credibility of witnesses. Where the opinions of two experts may appear to be in conflict, Federal Rule of Evidence 702 may serve as guidance. Under Rule 702, a witness qualifies as an expert by “knowledge, skill, experience, training, or education.” An opinion of an expert is admissible only if: (1) the opinion would assist the trier of facts in understanding the evidence or to determine a fact in issue, and (2) the opinion is based upon sufficient facts or data to be the product of reliable principles and methods that the witness applies to the facts of the case.

**RULES OF PRACTICE: SUMMARY DISPOSITION (EXPERT OPINION)**

While the expert's method for forming his opinion need not be generally recognized in the scientific community, the opinion must be based on the "methods and procedures of science" rather than on "subjective belief or unsupported speculation." *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589-90 (1993).

**RULES OF PRACTICE: SUMMARY DISPOSITION (GENUINE DISPUTED MATERIAL ISSUE OF FACT)**

Section 70.23(b) of 10 C.F.R. governs what factual disputes are material in a proceeding concerning a license application to use and possess special nuclear materials. Real disputes over facts that might affect the outcome of the case will most likely preclude the entry of summary disposition.

**RULES OF PRACTICE: SUMMARY DISPOSITION (GENUINE DISPUTED MATERIAL ISSUE OF FACT)**

Where there is a disagreement among competing experts over material facts, summary disposition may not be appropriate if it would require the trier of fact to "untangle the expert affidavits and decide 'which experts are more correct.'" *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 510 (2001). In that case, a hearing, if permitted by the applicable procedures, is the appropriate forum for the trier of fact to weigh the competing expert opinions on material facts.

**RULES OF PRACTICE: SUMMARY DISPOSITION (EXPERT OPINION)**

Conflicting expert opinions do not necessarily preclude summary disposition. In determining whether summary disposition is appropriate, the trier of fact must focus on whether the expert opinions are sufficiently grounded upon a factual basis.

**RULES OF PRACTICE: SUMMARY DISPOSITION (EXPERT OPINION)**

Bare assertions and general denials are insufficient to defend against a properly supported motion for summary disposition. *See* 10 C.F.R. § 2.749(b). Likewise, "quotations from or citations to [the] published work of researchers who have

apparently reached conclusions at variance with the movant's affiants' likely will be insufficient to defeat a motion for summary disposition. *See Carolina Power and Light Co.* (Shearon Harris Nuclear Power Plant, Units 1 and 2), LBP-84-7, 19 NRC 432, 435-36 (1984).

**RULES OF PRACTICE: SUMMARY DISPOSITION (EXPERT OPINION)**

The nonmoving party cannot avoid summary disposition by presenting an unsupported opinion of an expert. Expert opinion is admissible only if the affiant is competent to give an expert opinion and only if the factual basis for that opinion is adequately stated and explained in the affidavit. This latter point takes on added significance in an informal Subpart L proceeding such as this one under the old rules in which no party has a right to cross-examine any other party's expert at a subsequent trial.

**MEMORANDUM AND ORDER  
(Granting Applicant's Motion for Summary Disposition on  
Contention 3)**

**I. INTRODUCTION**

We have before us the motion of the Applicant, Duke Cogema Stone & Webster (DCS), filed pursuant to 10 C.F.R. §§ 2.749 and 2.1237,<sup>1</sup> for summary disposition of contention 3.<sup>2</sup> That contention, as admitted, challenges the seismic analysis presented by DCS in the Construction Authorization Request (CAR)<sup>3</sup> submitted for the Mixed Oxide Fuel Fabrication Facility (MOX Facility).<sup>4</sup> The Intervenor, Georgians Against Nuclear Energy (GANE), opposes the motion, arguing that summary disposition is not appropriate because the contention contains several

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<sup>1</sup> Part 2 of 10 C.F.R. was amended on January 14, 2004, but the amended provisions are applicable only to proceedings noticed on or before February 13, 2004. The instant proceeding is governed by the former 10 C.F.R. Part 2, Subpart L (i.e., informal hearing procedures). The Commission directed, however, that the Intervenor must file contentions and that the parties were entitled to use limited interrogatory and disposition discovery. *See* CLI-01-13, 53 NRC 478, 480-82 (2001).

<sup>2</sup> *See* Duke Cogema Stone & Webster's Motion for Summary Disposition on Contention 3 (Aug. 22, 2003) [hereinafter DCS Motion].

<sup>3</sup> *See* Duke Cogema Stone & Webster Mixed Oxide Fuel Fabrication Facility Construction Authorization Request (Feb. 28, 2001) (revised Oct. 31, 2002).

<sup>4</sup> *See* LBP-01-35, 54 NRC 403, 429-32 (2001) [hereinafter Memorandum and Order on Contentions].



genuine and material disputed factual issues.<sup>5</sup> For the reasons set forth below, we grant the motion for summary disposition of contention 3.

## II. BACKGROUND

This proceeding involves DCS's application to build a MOX Facility on a 41-acre site lying in Aiken County, South Carolina, within the Department of Energy's (DOE) 310-square-mile Savannah River Site. DCS submitted the original CAR to the NRC on February 28, 2001.<sup>6</sup> In response, GANE filed, *inter alia*, contention 3 challenging the seismic design of the MOX Facility, discussed in sections 1.3.5 through 1.3.7 of the original CAR.<sup>7</sup> The Board admitted contention 3 in its December 6, 2001 Memorandum and Order.<sup>8</sup> The gist of contention 3 asserts that DCS has not performed a seismic analysis that is adequate in either scope or documentation.<sup>9</sup> In support of its contention, GANE challenges the CAR's discussion of both the likelihood of a significant earthquake and the response of the MOX Facility site to an earthquake.<sup>10</sup> After several sets of interrogatories,<sup>11</sup>

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<sup>5</sup> See Georgians Against Nuclear Energy's Opposition to Duke Cogema Stone & Webster's Motion for Summary Disposition of GANE Contention 3 (Sept. 16, 2003) [hereinafter GANE Opposition].

<sup>6</sup> See *supra* note 3.

<sup>7</sup> See Georgians Against Nuclear Energy Contentions Opposing a License for Duke Cogema Stone & Webster To Construct a Plutonium Fuel Factory at Savannah River Site (Aug. 13, 2001) at 13-18 [hereinafter GANE Contention 3].

<sup>8</sup> See Memorandum and Order on Contentions, 54 NRC at 429-32.

<sup>9</sup> See *id.* at 429.

<sup>10</sup> See GANE Contention 3.

<sup>11</sup> DCS served two sets of interrogatories on GANE. See Duke Cogema Stone & Webster's First Set of Interrogatories to Georgians Against Nuclear Energy and Blue Ridge Environmental Defense League (May 31, 2002) [hereinafter First DCS Interrogatories]; Duke Cogema Stone & Webster's Second Set of Interrogatories to Georgians Against Nuclear Energy and Blue Ridge Environmental Defense League (Dec. 6, 2002) [hereinafter Second DCS Interrogatories]. GANE replied to these interrogatories, and supplemented its answers three times. See Georgians Against Nuclear Energy and Blue Ridge Environmental Defense League Objections and Responses to Applicant's First Set of Interrogatories and Request for Protective Order (June 28, 2002) [hereinafter First GANE Interrogatory Responses]; Georgians Against Nuclear Energy's Response to Applicant's Second Set of Interrogatories (Dec. 20, 2002) [hereinafter Second GANE Interrogatory Responses]; Georgians Against Nuclear Energy's and Blue Ridge Environmental Defense League's First Supplemental Response to Applicant's First Set of Interrogatories (Nov. 11, 2002) [hereinafter First GANE Supplemental Interrogatory Response]; Georgians Against Nuclear Energy's Second Supplemental Response to Applicant's First Set of Interrogatories (Dec. 20, 2002) [hereinafter Second GANE Supplemental Interrogatory Response]; Georgians Against Nuclear Energy's Third Supplemental Response to Applicant's First Set of Interrogatories (Mar. 5, 2003) [hereinafter Third GANE Supplemental Interrogatory Response].

an unopposed motion to the Board,<sup>12</sup> the submission of a revised CAR,<sup>13</sup> and the deposition of the Intervenor's expert, Dr. Leland Timothy Long,<sup>14</sup> the scope of contention 3 was narrowed by the parties.<sup>15</sup> The current focus of contention 3 is "whether the probabilistic [seismic] hazard analysis . . . prepared by DCS contains an adequate analysis of the likelihood of a severe earthquakes [*sic*] at the site of the proposed MOX Facility."<sup>16</sup>

In its motion for summary disposition, DCS dissects GANE's position into three major categories: (1) the challenge to the regulatorily required historical check of the most severe earthquake used by DCS;<sup>17</sup> (2) the challenge to the 0.2g (where g is the acceleration due to gravity) peak ground acceleration (PGA) used by DCS for the MOX Facility;<sup>18</sup> and (3) the challenge to the Electric Power Research Institute (EPRI) and Lawrence Livermore National Laboratory (LLNL) probabilistic seismic hazard assessment (PSHA) studies used by DCS.<sup>19</sup>

In the challenge to the historical check, GANE argues that the crustal velocity model, known as the Herrmann Crustal Model, improperly models the ground motions at the MOX Facility site from the 1886 Charleston earthquake.<sup>20</sup> Dr. Long, GANE's expert, estimates the error rate in the model is between 10% and 50%.<sup>21</sup> GANE believes the model used by DCS should have been developed specifically for the crustal path from Charleston to the MOX Facility site, rather than using the Herrmann Crustal Model crustal path of Bowman, South Carolina, to Atlanta, Georgia.<sup>22</sup>

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<sup>12</sup> See Order dated June 20, 2003 (granting unopposed motion to narrow contention 3); see also Deposition Transcript of Dr. Leland Timothy Long (June 25 & 26, 2003) at 403:9-13, 405:11-15, 416:6 to 417:4 [hereinafter Long Tr.].

<sup>13</sup> See *supra* note 3.

<sup>14</sup> See Long Tr. 403:9-13, 405:11-15, 416:6 to 417:4.

<sup>15</sup> See DCS Motion Attach. A (setting out revised GANE Contention 3 based on stipulations of counsel) [hereinafter Revised GANE Contention 3].

<sup>16</sup> GANE Opposition at 2; see *infra* note 19.

<sup>17</sup> See DCS Motion at 20-24.

<sup>18</sup> See *id.* at 47-50.

<sup>19</sup> See *id.* at 25-47. DCS's expert, Dr. Carl Stepp, refers to PSHA as a "probabilistic seismic hazard assessment." DCS Motion, Attach. C, Affidavit of Dr. Carl Stepp, ¶4 [hereinafter Stepp Aff.]. The NRC Staff's expert, Dr. John Stamatakos, also refers to the PSHAs in the same manner. See NRC Staff's Response to Motion for Summary Disposition Submitted by Duke Cogema Stone & Webster (Sept. 16, 2003) [hereinafter Staff Response], Exh. 1, Affidavit of Dr. John Stamatakos, ¶5 [hereinafter Stamatakos Aff.]. GANE's expert, however, refers to PSHA as a "probabilistic safety hazards analyses." See GANE Opposition, Attach. B, Declaration of Dr. Leland Timothy Long Regarding GANE Contention 3 at 2 [hereinafter Long Aff.]. The EPRI and LLNL sponsored PSHAs both use the term "seismic" and that is the proper term. See *infra* notes 82, 83.

<sup>20</sup> See Long Tr. at 426:3-7.

<sup>21</sup> See *id.* at 428:7-9.

<sup>22</sup> See *id.* at 123:11-20.

GANE also challenges the PGA used by DCS to calculate the horizontal ground surface spectrum at 33 hertz (Hz) for the seismic design of the MOX Facility.<sup>23</sup> While admitting that Regulatory Guide 1.60<sup>24</sup> is appropriate in determining the design of the MOX Facility to withstand earthquakes, GANE argues that DCS should have used a higher PGA than 0.2g.<sup>25</sup> GANE bases this argument on the June 2002 United States Geological Survey Seismic Hazard Maps which show a return frequency of 2500 years for 0.2g PGA at the MOX Facility, while DCS's reliance on the EPRI and LLNL PSHAs show a return frequency of 10,000 years.<sup>26</sup>

Finally, GANE has several challenges to DCS's use of the EPRI and LLNL PSHA studies. GANE believes that the studies are inappropriate for site-specific use,<sup>27</sup> and that even if appropriate, the studies are out of date.<sup>28</sup> It presents several arguments as to why the studies need to be updated to account for information that has emerged since they were published. GANE argues that the studies did not adequately consider: (1) the possibility of a large-magnitude earthquake occurring in the area of the MOX Facility;<sup>29</sup> (2) a 7.5-magnitude earthquake occurring in the Eastern Tennessee Seismic Zone;<sup>30</sup> (3) additional epicenters for a Charleston-type earthquake;<sup>31</sup> (4) a shorter recurrence interval for Charleston-type earthquakes;<sup>32</sup> (5) an increased magnitude of historical earthquakes in the South Carolina Coastal Plain;<sup>33</sup> and (6) new ground motion attenuation models that might produce higher ground motions for the MOX Facility than those produced by the EPRI and LLNL PSHAs.<sup>34</sup>

Based on GANE's arguments, DCS now seeks summary disposition of contention 3.<sup>35</sup> DCS claims that it is "incontrovertible" that DCS has complied with the regulations in 10 C.F.R. Part 70 that govern the design of the MOX Facility to protect against earthquakes.<sup>36</sup> Because DCS believes that none of the arguments

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<sup>23</sup> See Second GANE Supplemental Interrogatory Response at 3.1.

<sup>24</sup> See Regulatory Guide 1.60, "Design Response Spectra for Seismic Design of Nuclear Power Plants" (1973).

<sup>25</sup> See Second GANE Supplemental Interrogatory Response at 3.1 and 3.4; *see also* Long Tr. at 40:11-13.

<sup>26</sup> See Long Tr. at 413:16 to 415:1.

<sup>27</sup> See Long Tr. at 175:11 to 176:1-13.

<sup>28</sup> See GANE Opposition at 9-12.

<sup>29</sup> See *id.* at 11.

<sup>30</sup> See *id.*

<sup>31</sup> See *id.*

<sup>32</sup> See *id.*

<sup>33</sup> See *id.*

<sup>34</sup> See *id.*

<sup>35</sup> See DCS Motion at 2; DCS Reply to GANE Opposition to DCS Motion for Summary Disposition on Contention 3 (Oct. 8, 2003) [hereinafter DCS Reply].

<sup>36</sup> See DCS Motion at 2.

against the seismic design of the MOX Facility presents a genuine issue of material fact, it requests that the Board dispose of contention 3 by summary disposition.<sup>37</sup> The NRC Staff supports DCS's motion.<sup>38</sup>

GANE opposes the motion for summary disposition, claiming DCS has failed to prove that there were no genuinely disputed and material factual issues.<sup>39</sup> GANE further argues that its criticism of DCS's PSHA is "supported by scientific logic and the extensive experience of Dr. Long, as well as by professional papers."<sup>40</sup> Based on this support, GANE argues: (1) DCS's seismic analysis is significantly flawed;<sup>41</sup> (2) DCS inappropriately relies on the LLNL and EPRI studies;<sup>42</sup> (3) DCS fails to take into account new and site-specific information;<sup>43</sup> and (4) DCS fails to cure its errors through the application of conservatism.<sup>44</sup>

After the Board granted DCS's request to file a reply, GANE moved to strike it, arguing that DCS failed to adhere to its original purpose of clarifying technical statements and responding to previously unidentified documents by GANE.<sup>45</sup> DCS opposed the motion, arguing that DCS's response was proper and necessary to clarify technical statements that mischaracterize the MOX Facility, the work conducted to reach the facility's seismic design, to respond to documents not previously identified by GANE during discovery, and to respond to opinions not previously revealed by GANE during discovery.<sup>46</sup> The Board denied GANE's motion on October 24, 2003.<sup>47</sup>

### III. SUMMARY DISPOSITION

Pursuant to the summary disposition provisions of 10 C.F.R. § 2.749, made applicable to Subpart L proceedings by 10 C.F.R. § 2.2, summary disposition is available for all or any matters in a proceeding

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<sup>37</sup> See *id.*

<sup>38</sup> See Staff Response at 1.

<sup>39</sup> See GANE Opposition at 1; Georgians Against Nuclear Energy's Response to New Facts and Arguments in NRC Staff's Response to Duke Cogema Stone & Webster's Motion for Summary Disposition of GANE Contention 3 (Sept. 26, 2003) [hereinafter GANE Staff Response].

<sup>40</sup> GANE Opposition at 7.

<sup>41</sup> See *id.* at 7-8; Long Aff. ¶ 9(a).

<sup>42</sup> See GANE Opposition at 9-11; Long Aff. ¶¶ 7, 9.

<sup>43</sup> See GANE Opposition at 11-12; Long Aff. ¶¶ 9, 18, 41, 43.

<sup>44</sup> See GANE Opposition at 12-13; Long Aff. ¶ 9(e).

<sup>45</sup> See Georgians Against Nuclear Energy's Motion To Strike DCS' Reply to GANE's Opposition to DCS' Motion for Summary Disposition of GANE Contention 3 or, in the Alternative, Request for Leave To File Surreply at 1-2 (Oct. 16, 2003).

<sup>46</sup> See DCS Reply to GANE's October 16, 2003 Motion To Strike at 2 (Oct. 21, 2003).

<sup>47</sup> See Order (Oct. 24, 2003) (unpublished).

if 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.<sup>48</sup>

The Commission has held that summary disposition motions under 10 C.F.R. § 2.749 are analogous to summary judgment motions under Rule 56 of the Federal Rules of Civil Procedure and should be evaluated under the same standards.<sup>49</sup> Under both NRC and federal case law, the party seeking summary disposition bears the burden of showing the absence of a genuine issue of material fact.<sup>50</sup> Because the burden of proof is on the movant, “the evidence submitted must be construed in favor of the party in opposition thereto, who receives the benefit of any favorable inferences that can be drawn.”<sup>51</sup> Despite the burden on the movant, the party opposing summary disposition must set forth specific facts showing that there is a genuine issue.<sup>52</sup> To be considered genuine, “the factual record, considered in its entirety, must be enough in doubt so that there is a reason to hold a hearing to resolve the issue.”<sup>53</sup>

If there is a likelihood that a genuine issue of fact exists to be litigated, or if there is doubt as to whether the parties should be required to proceed further, the motion should be denied.<sup>54</sup> On the other hand, if the nonmoving party fails to oppose any material fact properly set out in the moving party’s statement of material facts that accompanies the summary disposition motion, then that fact will be deemed admitted.<sup>55</sup> After the moving party makes a proper showing for summary disposition, and the nonmoving party does not establish a genuine issue of material fact, then the Board may summarily dispose of the contention on the basis of the pleadings.<sup>56</sup>

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<sup>48</sup> 10 C.F.R. § 2.749(d).

<sup>49</sup> See *Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102 (1993).

<sup>50</sup> See *Adickes v. Kress & Co.*, 398 U.S. 144, 157 (1970); *Advanced Med. Sys., Inc.*, CLI-93-22, 38 NRC at 102.

<sup>51</sup> *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-17, 39 NRC 359, 361, *aff’d*, CLI-94-11, 40 NRC 55 (1994).

<sup>52</sup> See 10 C.F.R. § 2.749(b).

<sup>53</sup> *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), LBP-83-46, 18 NRC 218, 223 (1983).

<sup>54</sup> See *General Electric Co.* (GE Morris Operation Spent Fuel Storage Facility), LBP-82-14, 15 NRC 530, 532 (1982).

<sup>55</sup> See 10 C.F.R. § 2.749(a); *Advanced Med. Sys., Inc.*, CLI-93-22, 38 NRC at 102-03.

<sup>56</sup> See *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-73-12, 6 AEC 241, 242 (1973), *aff’d sub nom. BPI v. AEC*, 502 F.2d 424 (D.C. Cir. 1974).

Under Rule 56, federal case law makes clear that summary judgment is not appropriate where it would require a determination of the credibility of witnesses.<sup>57</sup> In the present case, where the opinions of two experts may appear to be in conflict with each other, Federal Rule of Evidence 702 may also serve as guidance in determining whether Dr. Long's opinions preclude summary disposition of contention 3.<sup>58</sup> Under Rule 702, a witness qualifies as an expert by "knowledge, skill, experience, training, or education."<sup>59</sup> An opinion of an expert is admissible only if: (1) the opinion would assist the trier of facts in understanding the evidence or to determine a fact in issue; and (2) the opinion is based upon sufficient facts or data to be the product of reliable principles and methods that the witness applied to the facts of the case.<sup>60</sup> While the expert's method for forming his opinion need not be generally recognized in the scientific community, the opinion must be based on the "methods and procedures of science" rather than on "subjective belief or unsupported speculation."<sup>61</sup>

While the courts have applied Rule 702 liberally by favoring the admission of any evidence to assist the trier of fact,<sup>62</sup> the applicable substantive law in the present case, 10 C.F.R. § 70.23(b), governs what factual disputes are material in a proceeding. Real disputes over facts that might affect the outcome of the case will most likely preclude the entry of summary judgment.<sup>63</sup> Where there is a disagreement among competing experts over material facts, summary judgment may not be appropriate if it would require the trier of fact to "untangle the expert affidavits and decide 'which experts are more correct.'"<sup>64</sup> In that case, a hearing, if permitted by the applicable procedures, is the appropriate forum for the trier of fact to weigh the competing expert opinions on material facts.<sup>65</sup>

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<sup>57</sup> See, e.g., *Leonard v. Dixie Well Service & Supply, Inc.*, 828 F.2d 291, 294 (5th Cir. 1987); *Neely v. St. Paul Fire and Marine Insurance Co.*, 584 F.2d 341, 344 (9th Cir. 1978).

<sup>58</sup> See *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 732 n.67 (1985) (citing Fed. R. Evid. 702); see also *Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982).

<sup>59</sup> Fed. R. Evid. 702.

<sup>60</sup> *Id.*

<sup>61</sup> *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589-90 (1993).

<sup>62</sup> See *Kannankeril v. Terminix International*, 128 F.3d 802, 806 (3d Cir. 1997); *Holbrook v. Lykes*, 80 F.3d 777, 780 (3d Cir. 1996); *In re Paoli R.R. Yard PCB Litigation*, 35 F.3d 717, 741-43 (3d Cir. 1994).

<sup>63</sup> See *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986).

<sup>64</sup> *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 510 (2001) (citing *Norfolk Southern Corp. v. Oberly*, 632 F. Supp. 1225, 1243 (D. Del. 1986), *aff'd on other grounds*, 822 F.2d 388 (3d Cir. 1987)).

<sup>65</sup> See *Private Fuel Storage, L.L.C.*, LBP-01-39, 54 NRC at 510 (citing *Kannankeril v. Terminix Int'l*, 128 F.3d at 807).

Conflicting expert opinions, however, do not necessarily preclude summary disposition. In determining whether summary judgment is appropriate, the trier of fact must focus on whether the expert opinions are sufficiently grounded upon a factual basis.<sup>66</sup> Bare assertions and general denials are insufficient to defend against a properly supported motion for summary disposition.<sup>67</sup> Likewise, “quotations from or citations to [the] published work of researchers who have apparently reached conclusions at variance with the movant’s affidants” likely will be insufficient to defeat a motion for summary disposition.<sup>68</sup> Thus, the nonmoving party cannot avoid summary judgment by presenting an unsupported opinion of an expert.<sup>69</sup> Expert opinion is admissible only if the affiant is competent to give an expert opinion and only if the factual basis for that opinion is adequately stated and explained in the affidavit.<sup>70</sup> This latter point takes on added significance in an informal Subpart L proceeding such as this one under the old rules in which no party has a right to cross-examine any other party’s expert at a subsequent trial. Rather, the parties only have the right to file written presentations supported by affidavits and documentary material with the possibility of the presiding officer questioning the parties’ experts at an oral session.<sup>71</sup> In such circumstances, the nonmoving party and its expert, in opposing summary disposition, must clearly and thoroughly explain the basis for the expert’s opinion.

#### IV. APPLICABLE REGULATIONS

In order to receive approval for construction of the MOX Facility, DCS must satisfy 10 C.F.R. §§ 70.23(a)(3), 70.23(b), and 70.64(a)(2). Pursuant to section 70.23(a)(3), the NRC must determine whether the “applicant’s proposed equipment and facilities are adequate to protect health and minimize danger to life or property.” Under § 70.23(b), the NRC must determine whether the “design bases of the principal structures, systems, and components . . . provide reasonable

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<sup>66</sup> See *Bragdon v. Abbott*, 524 U.S. 624, 653 (1998); *Kannankeril v. Terminix Int’l*, 128 F.3d at 807.

<sup>67</sup> See 10 C.F.R. § 2.749(b); *Advanced Med. Sys., Inc.*, CLI-93-22, 38 NRC at 102; *Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-629, 13 NRC 75, 81 (1981); *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-18, 44 NRC 86, 103 (1996).

<sup>68</sup> *Carolina Power and Light Co.* (Shearon Harris Nuclear Power Plant, Units 1 and 2), LBP-84-7, 19 NRC 432, 435-36 (1984).

<sup>69</sup> See *United States v. Various Slot Machines on Guam*, 658 F.2d 697, 700 (9th Cir. 1981); *Rohrbough by Rohrbough v. Wyeth Laboratories, Inc.*, 719 F. Supp. 470, 475 (N. D. W. Va. 1989), *aff’d on other grounds*, 916 F.2d 970 (4th Cir. 1990); *State Farm Fire and Casualty Co. v. Miles*, 730 F. Supp. 1462, 1473 (S.D. Ind. 1990), *aff’d*, 930 F.2d 25 (7th Cir. 1991).

<sup>70</sup> See *Garside v. Osco Drug, Inc.*, 895 F.2d 46, 50 (1st Cir. 1990); *United States v. Various Slot Mach. on Guam*, 658 F.2d. at 700.

<sup>71</sup> See 10 C.F.R. § 2.1233; CLI-01-13, 53 NRC at 482.

assurance of protection against natural phenomena.” Finally, section 70.64(a)(2) requires that the facility design “must provide for adequate protection against natural phenomena with consideration of the most severe documented historical events for the site.”

The NRC Staff provides guidance for compliance with the regulatory standards in the MOX Standard Review Plan.<sup>72</sup> NUREG-1718 recommends a “risk informed” approach to the evaluation of natural hazards, and recommends that the applicant consult various other NRC guidance documents, including Regulatory Guide 1.165, “Identification and Characterization of Seismic Sources and Determination of Safe Shutdown Earthquake Ground Motion” (1997). NUREG-1718 also contemplates that the Applicant will use probabilistic seismic analyses.<sup>73</sup> Additionally, NUREG-1718 states that other regulatory guides for nuclear power reactors “provide useful reference information,” so the Applicant may look to those for guidance as well.<sup>74</sup>

## V. BACKGROUND OF DCS’S SEISMIC ANALYSES

### A. Background of EPRI and LLNL PSHAs

In its seismic design of the MOX Facility,<sup>75</sup> DCS relied on the EPRI and LLNL PSHA studies and the Savannah River Site (SRS)–specific seismic design published in 1997 by the Westinghouse Savannah River Corporation (WSRC).<sup>76</sup> A PSHA is an analytical methodology that quantifies the probability of exceeding various ground motion levels at a given location during a certain amount of time, usually 1 year.<sup>77</sup> In making the hazard calculation, the methodology uses a weighted combination of seismic sources, source parameters such as magnitude and recurrence frequency, and ground motion models.<sup>78</sup> Because the inputs into the calculation are weighted, and various experts might be expected to assign different weights to seismic sources and source parameters, and may rely, to differing degrees, on applicable ground motion models, the experts’ conclusions can vary greatly.<sup>79</sup> Therefore, a complete PSHA takes into account alternative

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<sup>72</sup> See NUREG-1718, “Standard Review Plan for the Review of an Application for a Mixed Oxide (MOX) Fuel Fabrication Facility” (Aug. 2000) [hereinafter NUREG-1718].

<sup>73</sup> See NUREG-1718, App. B at B-1.

<sup>74</sup> *Id.*

<sup>75</sup> DCS Motion at 7.

<sup>76</sup> See R.C. Lee et al., “SRS Seismic Response Analysis and Design Basis Guidelines,” WSRC-TR-97-0085, Rev. 0 (1997).

<sup>77</sup> DCS Motion at 8.

<sup>78</sup> See *id.*

<sup>79</sup> See *id.*



inputs prepared by many different experts.<sup>80</sup> The inputs may be site-specific or may be done for a large geographic region and then applied to many sites of interest within that geographic area.<sup>81</sup>

Two independent PSHA studies have been conducted for nuclear facilities in the United States east of the Rocky Mountains. The studies were conducted simultaneously by LLNL on behalf of the NRC,<sup>82</sup> and by EPRI, on behalf of the nuclear utilities.<sup>83</sup> Both studies used multiple experts<sup>84</sup> to determine the various inputs used in the calculations, and while the studies differ primarily in the methodology used to obtain the inputs and assessments of uncertainty, both are accepted by the NRC Staff as suitable for developing a site-specific PSHA.<sup>85</sup>

The EPRI and LLNL PSHAs are applied by entering a site's latitude and longitude into the elected study's computer code, computing the contribution of individual seismic source hazards for that specific site, and then aggregating the results to calculate the probability distribution of exceeding various levels of ground motion.<sup>86</sup> The probability distribution of annual frequency of exceedance for a specific ground motion is the probabilistic seismic hazard output.<sup>87</sup> The hazard is computed for peak ground acceleration and acceleration over a range of frequencies that are critical for the structural design of the proposed facility.

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<sup>80</sup> *See id.*

<sup>81</sup> *See id.*

<sup>82</sup> *See* D.L. Bernreuter et al., "Seismic Hazard Characterization of 69 Nuclear Plant Sites East of the Rocky Mountains," NUREG/CR-5250 (Jan. 1989); P. Sobel, "Revised Livermore Seismic Hazard Estimates for Sixty-Nine Nuclear Power Plant Sites East of the Rocky Mountains," NUREG-1488 (April 1994); J.B. Savy et al., "Eastern Seismic Hazard Characterization Update," UCRL-ID-115111 (June 1993) [hereinafter LLNL PSHA].

<sup>83</sup> *See* EPRI, "Probabilistic Seismic Hazard Evaluations at Nuclear Plant Sites in the Central and Eastern United States," NP-4726, all volumes (1989-1991) [hereinafter EPRI PSHA].

<sup>84</sup> The LLNL PSHA used approximately ten experts to evaluate seismic sources and seven experts to assess uncertainty in ground motion estimation. *See* Stepp Aff. ¶ 13. The experts' conclusions were obtained for the central and eastern United States and covered sixty-nine nuclear power plant sites. *See id.* The study combined the alternative seismic sources uncertainty distributions with the ground motions estimation uncertainty distributions to compute the ground motion hazard at these sites. *See id.* The EPRI study used six expert teams to evaluate alternative seismic sources and characterize seismic source parameters. *See id.* ¶ 14. The EPRI study relied on ground motion input prepared by EPRI consultants and two additional ground motion models for the central and eastern United States. *See id.*

<sup>85</sup> *See* Stepp Aff. ¶ 12; *see also* U.S. NRC, "Identification and Characterization of Seismic Sources and Determination of Safe Shutdown Earthquake Ground Motion," Reg. Guide 1.165 (Mar. 1997), at 2-3. The U.S. Department of Energy also accepts these studies. *See* U.S. Department of Energy, "Natural Phenomena Hazards Assessment Criteria," DOE-STD-1023-95, Change Notice No. 1 (section 3.1.2.1) (Jan. 1996), at 6 [hereinafter DOE-STD 1023-95].

<sup>86</sup> *See* Stepp Aff. ¶ 15.

<sup>87</sup> *See id.*

## B. DCS's Site-Specific Seismic Analyses

DCS relied on a 1997 SRS-specific seismic response analysis performed by WSRC that took into consideration local properties such as soil column thickness, soil and bedrock shear-wave velocity, and soil dynamic properties and used the bedrock outcrop hazards in the EPRI and LLNL PSHAs for the latitude and longitude for the site.<sup>88</sup> The SRS-specific analysis that DCS relied upon used an average of the LLNL and EPRI PSHA curves to obtain design basis ground motions.<sup>89</sup>

DCS then applied the SRS-specific analyses to separately generated seismic design basis ground motions by performance category (PC). According to DCS, the proposed MOX Facility has four performance categories based on a performance goal stated in terms of acceptable damage to office buildings at PC-1 and structures, systems, and components that have radiological protection safety significance for a nuclear facility at PC-3 and PC-4.<sup>90</sup> DCS states that, in the seismic analyses, the performance goals for the different PCs are examined for a combination of the seismic design basis ground motion and the seismic design criteria.<sup>91</sup> DCS states that to ensure the facility meets its desired performance goal, each analyzed seismic design basis ground motion must take into account the inherent probability of occurrence associated with it.<sup>92</sup> Accordingly, DCS declares that combining the seismic design basis ground motions with the deterministic seismic design criteria provides reasonable assurance that the PC will perform as intended.<sup>93</sup>

DCS explains that peak ground acceleration only becomes a factor in the higher vibrational frequency events that are usually at vibrational frequencies above the levels that may cause damage to the structures at nuclear facilities.<sup>94</sup> For example, PC-3 has a peak ground acceleration at the surface of 33 Hz. None of the safety structures at the MOX Facility, DCS claims, resonates at this frequency; rather, they resonate at frequencies between 2.5 and 9 Hz.<sup>95</sup>

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<sup>88</sup> See *id.* ¶ 17; see also R.C. Lee et al., "SRS Seismic Response Analysis and Design Basis Guidelines," WSRC-TR-97-0085, Rev. 0 (1997); R.C. Lee, "Soil Surface Seismic Hazard and Design Basis Guidelines for Performance Category 1 & 2 SRS Facilities," WSRC-TR-98-00263, Rev. 0 (1998).

<sup>89</sup> See Stepp Aff. ¶ 17.

<sup>90</sup> See DCS Motion at 11.

<sup>91</sup> See *id.*

<sup>92</sup> See *id.* at 12.

<sup>93</sup> See *id.*

<sup>94</sup> See *id.*

<sup>95</sup> See *id.*

## VI. ANALYSIS

GANE challenges the adequacy of the historical check DCS used for the MOX Facility. It also challenges the use of 0.2g effective PGA used by DCS in determining the horizontal ground surface spectrum for the seismic design of the MOX Facility. Finally, GANE challenges DCS's use of the EPRI and LLNL PSHAs in determining site-specific seismic criteria for the facility.

### A. Adequacy of the Historical Check

The MOX Facility is located on the inland border of South Carolina and Georgia.<sup>96</sup> In accordance with 10 C.F.R. § 70.64(a)(2), the historical check, that is, the most severe documented historical seismological event, is represented by a repeat of the 1886 Charleston earthquake (1886 earthquake) placed 120 kilometers southeast of the site with a moment magnitude of 7.3.<sup>97</sup> With the 1886 earthquake as background, DCS planned the seismic design basis ground motions for PC-3 to envelope the ground motions of historical earthquakes within 200 kilometers from the site equal to or larger than magnitude 6.0, using the calculated ground motions at the site of the 1886 earthquake.<sup>98</sup>

In order to determine the ground motions at the site of the 1886 earthquake, DCS used the Herrmann Crustal Model, which uses a seismic wave attenuation path from Bowman, South Carolina, to Atlanta, Georgia, and simulates the earth's crust with four layers on top of an infinite underlying layer.<sup>99</sup> DCS modified the Herrmann Crustal Model by removing the shallowest layer, thereby creating three layers over an infinite layer, to create better agreement with the local shallow bedrock velocity data.<sup>100</sup> It used a separate model to account for the Mohorovicic discontinuity, or Moho Bounce, an effect where the seismic waves reflect off the boundary between the earth's crust and mantle (dubbed "the Moho"), placing the Moho at a depth of about 29 kilometers.<sup>101</sup> DCS asserts that a 7.3 moment

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<sup>96</sup> See *id.* at 13 and Attach. D (modified from Revised CAR at 1.3.5-34).

<sup>97</sup> See DCS Motion at 13.

In the summary disposition filings, the parties use the term "moment magnitude." That term refers to a scale introduced by Hiroo Kanamori that is a succession to the more commonly known Richter magnitude scale. Like other magnitude scales, the moment magnitude scale is used by seismologists to compare the energy released by earthquakes and it roughly agrees with the magnitude estimates of other such scales. See generally Katsuyuki Abe, *Magnitudes and Moments of Earthquakes*, in *Global Earth Physics, A Handbook of Physical Constants* (Thomas J. Ahrens, ed., 1995), at 207.

<sup>98</sup> See DCS Motion at 13; DOE-STD-1023-95, at 11 (section 3.1.5).

<sup>99</sup> See DCS Motion at 13.

<sup>100</sup> See *id.* at 13-14.

<sup>101</sup> See *id.* at 14; Stepp Aff. ¶ 24.

magnitude earthquake with an epicenter located 120 kilometers southeast of the MOX Facility is appropriate or conservative for modeling the historic 1886 earthquake.<sup>102</sup>

While it is undisputed that the 1886 earthquake was the most severe documented historical earthquake,<sup>103</sup> GANE has several concerns with DCS's application of the crustal velocity model to the historical check. First, GANE argues that, based on the opinion of its expert, Dr. Long, the assumption of a 7.3 moment magnitude earthquake with an epicenter located 120 kilometers southeast of the MOX Facility site is neither robust nor conservative.<sup>104</sup> Dr. Long bases his opinion on the assertion that effects like the Moho Bounce increase shaking with increased distance.<sup>105</sup> Further, Dr. Long estimates that the use of the Herrmann Crustal Model may produce erroneous ground motions with an error rate as much as 50%.<sup>106</sup> As GANE notes, Dr. Long bases this determination on "an educated guess."<sup>107</sup> Consequently, GANE argues, DCS needs to recalculate the seismic hazards using current and site-specific information in order to provide a reasonably reliable PSHA.<sup>108</sup> It is not appropriate, GANE continues, for DCS to err in its calculations and then correct possible mistakes by introducing a "so-called conservatism."<sup>109</sup>

In response, DCS notes that Dr. Long has twice referred to the 120-kilometer epicenter as "realistic."<sup>110</sup> "Realistic," DCS argues, is synonymous with "appropriate."<sup>111</sup> DCS continues by asserting that Dr. Long's argument against placing the epicenter 120 kilometers from the MOX Facility is a new argument not previously revealed by GANE during discovery.<sup>112</sup> In any event, DCS states that

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<sup>102</sup> See DCS Motion, Attach. B, Statement of Material Facts on Which No Genuine Issue Exists in Support of DCS Motion for Summary Disposition on Contention 3, ¶ 3 [hereinafter DCS Undisputed Material Facts].

<sup>103</sup> See First GANE Interrogatory Responses 3.32; Long Tr. at 129:10-15; see also Revised CAR at 1.3.6-27; GANE Opposition, Attach. A, GANE's Statement of Genuinely Disputed Material Facts ¶ 1 [hereinafter GANE Disputed Material Facts].

<sup>104</sup> See GANE Opposition at 2; Long Aff. ¶¶ 8, 56.

<sup>105</sup> See Long Aff. ¶ 56; GANE Disputed Material Facts ¶ 1.

<sup>106</sup> See Long Aff. ¶ 57; GANE Disputed Material Facts ¶ 2.

<sup>107</sup> GANE Disputed Material Facts ¶ 2.

<sup>108</sup> See GANE Opposition 7-8; GANE Disputed Material Facts ¶ 2.

<sup>109</sup> GANE Disputed Material Facts ¶ 2.

<sup>110</sup> See DCS Motion at 21 & n.72; Long Tr. at 190:1-6, 13-14. In this regard, Dr. Long responded during his disposition to the question whether, for purposes of the historical check, he believed that there were any inadequacies in the location used in the CAR for a repeat of the 1886 Charleston earthquake by stating "[n]o, that would be realistic." Long Tr. at 190:5-6. See also Long Tr. at 130:3-5 (where Dr. Long responds that the moment magnitude of the 1886 Charleston earthquake was "[p]robably around 7.0").

<sup>111</sup> See DCS Reply at 6.

<sup>112</sup> See *id.*

GANE fails to dispute that the “Moho Bounce is only important for earthquakes which have epicenters located between about 80 and 120 [kilometers] from the MOX Facility.”<sup>113</sup> It also asserts that Dr. Long admitted that the Moho Bounce has its maximum effect at 100 kilometers from the epicenter.<sup>114</sup>

Based on these arguments, plus the analyses of its own expert, Dr. Stepp, DCS argues that placing the epicenter any further away than 120 kilometers from the MOX Facility would result in computing smaller (less conservative) ground motions.<sup>115</sup> Conversely, DCS asserts that placing the epicenter any closer than 120 kilometers is also not appropriate because an adequate historical check uses the most significant historical seismic event, the 1886 earthquake that places the epicenter at 120 kilometers from the MOX Facility.<sup>116</sup>

DCS further notes that GANE does not dispute DCS Undisputed Material Facts ¶¶ 4-9, that state, *inter alia*, that the horizontal ground surface spectrum for the MOX Facility uses the Regulatory Guide 1.60 spectrum anchored at 0.2g PGA, and that even if the ground motions in the historical check of the PC-3 spectrum were increased by 50% above the 1886 earthquake, the MOX spectrum still envelopes the increased ground motion for all frequencies relevant to the structural integrity of the MOX Facility (i.e., at between 2.5 and 9 Hz).<sup>117</sup> At best, DCS argues, GANE has only suggested that the historical check relied upon by DCS is incorrect. Without providing any verification or quantification to such claims, DCS continues, GANE then asserts that correcting the erroneous historical check would yield increased ground motions of 10-50%. In addition to urging that this hypothesis lacks foundation, DCS asserts that the MOX spectrum is nevertheless conservative enough to envelope GANE’s suggested increased ground motions.<sup>118</sup> DCS concludes therefore that the historical check is appropriate and satisfies the requirements of 10 C.F.R. § 70.64(a)(2).

Pursuant to that regulatory provision, an applicant for a new facility must design the facility to “provide for adequate protection against natural phenomena with consideration of the most severe documented historical events for the site.”<sup>119</sup> Both GANE and DCS agree that the most significant historical event to be considered in the design of the MOX Facility is the 1886 earthquake.<sup>120</sup> The parties do not agree, however, on whether a 7.3 moment magnitude earthquake

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<sup>113</sup> *Id.* (quoting DCS Undisputed Material Facts ¶ 44); *see* Long Aff. ¶ 22.

<sup>114</sup> *See* DCS Reply at 6; Long Tr. at 220:9-14.

<sup>115</sup> *See* DCS Reply at 6; *id.*, Supplemental Affidavit of Dr. Carl Stepp ¶¶ 9, 10 [hereinafter Stepp Supplemental Aff.].

<sup>116</sup> *See* DCS Reply at 6; Stepp Supplemental Aff. ¶ 10.

<sup>117</sup> *See* DCS Reply at 7; DCS Undisputed Material Facts ¶¶ 4-9.

<sup>118</sup> *See* DCS Reply at 7-8, DCS Undisputed Material Facts ¶ 9; Stepp Supplemental Aff. ¶ 11.

<sup>119</sup> 10 C.F.R. § 70.64(a)(2).

<sup>120</sup> *See supra* note 104; *see also* DCS Undisputed Material Facts ¶ 2.

with an epicenter located 120 kilometers southeast of the MOX Facility site is appropriate or conservative for modeling the historic 1886 earthquake's ground motions.<sup>121</sup> GANE's expert, Dr. Long, has twice admitted, however, that placing the epicenter of the 1886 earthquake 120 kilometers from the MOX Facility is "realistic."<sup>122</sup> In the circumstances presented, as DCS claims, we conclude that "realistic" is synonymous with "appropriate."

Because section 70.64(a)(2) requires that the applicant take into consideration the most severe documented historical event in designing its facility, and both parties agree that the most significant event is the 1886 earthquake, DCS needs only to provide a "realistic," i.e., an accurate interpretation, of the earthquake and its potential effects on the MOX Facility to satisfy section 70.64(a)(2). Thus, *in terms of the regulation*, GANE cannot logically argue both that DCS's consideration of the 1886 earthquake is realistic (i.e., an accurate portrayal of the 1886 earthquake) but that DCS's consideration of it is not appropriate.

Moreover, GANE's argument fails to present any genuine issue of material facts for the Board to adjudicate regarding the adequacy of DCS's historical check within the meaning of the regulation. GANE argues that it is not necessarily conservative to place the epicenter of the 1886 earthquake at 120 kilometers from the MOX Facility because of the Moho Bounce. Because GANE does not dispute DCS's assertion of fact that the "Moho bounce is only important for earthquakes which have epicenters located about 80 to 120 [kilometers] from the MOX facility," that fact is deemed admitted.<sup>123</sup> Additionally, GANE's expert admits that the Moho Bounce has its maximum effect at 100 kilometers away from the MOX Facility.<sup>124</sup> Thus, DCS is correct that placing the epicenter at a distance greater than 120 kilometers from the MOX Facility would not produce any more conservative ground motions than an epicenter placed at 120 kilometers. Further, because both parties agree that the 1886 Charleston earthquake is the most significant historical event for the MOX Facility, and the facility is 120 kilometers from the epicenter of that event, DCS is correct in placing the epicenter at the point that coincides with the highest reported historical ground shaking effects from the 1886 earthquakes.

GANE's argument also lacks foundation in that Dr. Long suggests that the impact of DCS's alleged errors would increase the ground motion by as much as 50%, but he fails to provide a scientific explanation for this occurrence; rather, GANE concedes that Dr. Long was making an "educated guess." In determining whether conflicting expert testimony necessarily precludes summary disposition, the Board must focus on whether the experts' opinions are sufficiently

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<sup>121</sup> See DCS Undisputed Material Facts ¶ 3; GANE Disputed Material Facts ¶ 1.

<sup>122</sup> See *supra* note 110 and accompanying text.

<sup>123</sup> See DCS Undisputed Material Facts ¶ 44; 10 C.F.R. § 2.749(a).

<sup>124</sup> Long Tr. at 220:13-14.

grounded upon facts.<sup>125</sup> By merely stating that the error rate could be as high as 50%, without providing a factual basis for his opinion, Dr. Long fails to provide the foundation necessary to support his claim. Because bare assertions and general denials are insufficient to defend against a properly supported motion for summary disposition,<sup>126</sup> Dr. Long's educated guess does not create a genuine issue of material fact that will defeat DCS's motion for summary disposition.

Finally, and most importantly, even were Dr. Long's opinion adequately supported, the MOX Facility's seismic design is sufficiently conservative to envelope a 50% increase in postulated ground motions. Assuming arguendo, that GANE is correct in asserting that DCS's error rate is as high as 50%, the historical ground motions produced by the 1886 earthquake still would be enveloped by the seismic design basis spectrum for all frequencies of structural interest (i.e., 2.5 and 9 Hz). Thus, as the Staff agrees,<sup>127</sup> DCS is correct that the MOX Facility design maintains its integrity for ground motions well beyond those of the 1886 earthquake. Thus, GANE has failed to establish any genuine issue of material fact regarding the accuracy of the historical check for the MOX Facility or that DCS's historical check does not meet the requirements of 10 C.F.R. § 70.64(a)(2).

#### **B. Adequacy of 0.2g Effective PGA Used by DCS To Determine the Horizontal Ground Surface Spectrum for the Seismic Design of the MOX Facility**

In its motion for summary disposition, DCS addresses GANE's apparent challenge — contained in GANE's interrogatory answers — to the 0.2g effective PGA used by DCS to anchor the Regulatory Guide 1.60 horizontal ground surface spectrum at 33 Hz for the seismic design of the MOX Facility.<sup>128</sup> But GANE's opposition to DCS's summary disposition motion is silent with respect to support for this purported challenge. Rather, GANE's opposition merely states that “[t]ime and space constraints do not permit GANE to rehearse each of DCS's technical arguments in this response.”<sup>129</sup> Similarly, GANE's statement of disputed material facts and the affidavit of Dr. Long make little more than passing reference to its apparent challenge.<sup>130</sup> Thus, GANE's failure in its opposition to DCS's summary disposition motion to articulate adequately and understandably its challenge in this regard is grounds to dismiss any such challenge. Although

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<sup>125</sup> See *supra* notes 66, 70.

<sup>126</sup> See *supra* note 67.

<sup>127</sup> See Staff Response at 9.

<sup>128</sup> See DCS Motion at 47-48.

<sup>129</sup> See GANE Opposition at 7.

<sup>130</sup> See GANE Disputed Material Facts ¶¶ 31-33; Long Aff. ¶¶ 70-71.

unnecessary in these circumstances, we nevertheless for the sake of completeness attempt to address GANE's purported challenge as best we can discern it.

In its summary disposition motion, DCS initially notes that Dr. Long disagrees with using the United States Geological Survey (USGS) maps for site-specific purposes.<sup>131</sup> According to DCS, this fact alone invalidates GANE's use of the USGS seismic hazard maps because their own expert does not believe the maps are appropriate for site-specific use; therefore this matter cannot involve a genuine issue of material fact.<sup>132</sup> Additionally, DCS argues that the seismic hazard maps developed by USGS cannot meaningfully be compared with the seismic hazard developed for the MOX Facility.<sup>133</sup> DCS states that the USGS seismic hazard map ground motions are developed using site condition assumptions characterized by USGS as "firm-rock."<sup>134</sup> Dr. Stepp asserts that firm-rock is prevalent in the western United States, but does not exist beneath, or in the vicinity of, the MOX Facility; rather, "hard-rock" exists below the MOX Facility.<sup>135</sup> He states that this distinction is significant because firm-rock and hard-rock have significantly different shear-wave velocities and applying the firm-rock assumptions to a hard-rock site overestimates the ground motions at the site and leads to a decrease in the return period for a given peak acceleration.<sup>136</sup> DCS claims that this variation is consistent with the results GANE found using the USGS hazard maps which suggest a return rate of 2500 years rather than 10,000 years for 0.2g PGA.<sup>137</sup>

DCS also points to several other differences that make the USGS hazard maps inappropriate for site-specific use, including the depth to rock, the soil properties, and bedrock material properties at the proposed site.<sup>138</sup> It asserts that the 1997 SRS-specific seismic analysis DCS relied upon takes into account the unique site characteristics of the MOX Facility, while the USGS hazard maps relied on by GANE do not.<sup>139</sup> This distinction is fundamental, DCS argues, because site-specific soil conditions strongly affect earthquake ground motions.<sup>140</sup> Thus, DCS points out that an accurate seismic analysis must model the soil and bedrock as close to the actual geology at the MOX Facility site as possible and the USGS maps do not take into account the site-specific geology.<sup>141</sup> Finally, DCS notes

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<sup>131</sup> See DCS Motion at 48; *see also* Long Tr. at 35:19-20 to 36:1-4.

<sup>132</sup> See DCS Motion at 48.

<sup>133</sup> See *id.*

<sup>134</sup> See *id.*

<sup>135</sup> See Stepp Aff. ¶ 75.

<sup>136</sup> See *id.* ¶ 76.

<sup>137</sup> See DCS Motion at 49; Stepp Aff. ¶ 76.

<sup>138</sup> See DCS Motion at 49; Stepp Aff. ¶ 77.

<sup>139</sup> See DCS Motion at 49.

<sup>140</sup> See DCS Motion at 49; Stepp Aff. ¶ 77.

<sup>141</sup> See DCS Motion at 49; Stepp Aff. ¶ 77.



that the methodology used to make the USGS seismic hazard maps was less structured than, and differs significantly from, the methodologies used by EPRI and LLNL for assessing ground motion hazards for the seismic design and risk assessment of nuclear facilities.<sup>142</sup> DCS concludes that a comparison of the USGS national seismic hazard maps to the MOX spectrum is like comparing “apples and oranges.”<sup>143</sup> Consequently, DCS claims that the issue fails to raise a genuine issue of material fact and should be disposed of by summary disposition.<sup>144</sup>

As previously noted, GANE’s opposition to DCS’s summary disposition motion does not respond to, or directly dispute, most of these DCS assertions. Rather, in its statement of disputed material facts, which are taken nearly verbatim from Dr. Long’s affidavit, GANE merely states that the computation of the 2500-year return period from the USGS hazard maps and that of 10,000 years from the PSHAs used by DCS should not be so different and that the statistical relation between the two should differ only slightly, not by a factor of four.<sup>145</sup> With respect to DCS’s hard-rock/firm-rock distinction, GANE’s statement reiterates Dr. Long’s affidavit which states, without elaboration, that this is not a simple issue and that, in effect, he would have to see how the data used by USGS figured into its computations to determine whether USGS’s firm-rock assumptions for a hard-rock site overestimate the ground motions for the MOX Facility.<sup>146</sup>

GANE appears to base its challenge to DCS’s use of a 0.2g effective PGA on Dr. Long’s comparison of data from the USGS seismic hazard maps with the MOX Facility spectrum.<sup>147</sup> Although apparently conceding that the Regulatory Guide 1.60 spectral shape is appropriate for the MOX Facility,<sup>148</sup> GANE asserts that the June 2002 version of the USGS maps show, in the area of the proposed facility, a return rate for 0.2g PGA of about 2500 years.<sup>149</sup> GANE then asserts, without more, that the hazard reported by the USGS maps is larger than the one DCS has assigned to the MOX Facility.<sup>150</sup> Neither GANE nor Dr. Long specifies what the higher PGA should be.<sup>151</sup>

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<sup>142</sup> See DCS Motion at 50.

<sup>143</sup> *Id.*

<sup>144</sup> See *id.*

<sup>145</sup> See GANE Disputed Material Facts ¶ 31; see also Long Aff. ¶ 70.

<sup>146</sup> See Long Aff. ¶ 71; see also GANE Disputed Material Facts ¶ 33.

<sup>147</sup> At his deposition, Dr. Long stated he obtained the seismic hazard maps from the USGS Web site. See Long Tr. at 414:22 to 415:1. GANE did not make the USGS hazard maps an exhibit to its opposition to DCS’s summary disposition motion.

<sup>148</sup> See Long Tr. at 40:11-13.

<sup>149</sup> See GANE Disputed Material Facts ¶ 31.

<sup>150</sup> See *id.*

<sup>151</sup> See Long Tr. at 133:1-5, 183:1-5.

In its reply, DCS argues that GANE underestimates the robustness of the Regulatory Guide 1.60 spectrum that DCS used as the horizontal ground surface spectrum for the seismic design basis for the MOX Facility.<sup>152</sup> Although Regulatory Guide 1.60 defines the PGA for 0.2g at 33 Hz for the MOX Facility, DCS states that the ground acceleration for the frequencies of practical structural interest are significantly higher than 0.2g.<sup>153</sup> DCS notes that the MOX spectrum envelopes 0.5g for 9 Hz and 0.6g for 2.5 Hz, and that this conservatism, which GANE fails to demonstrate is inappropriate, is inherent in the Regulatory Guide 1.60 spectral shape used as the horizontal surface spectrum for the MOX Facility.<sup>154</sup>

The Staff agrees with DCS that GANE has failed to show how the higher hazard predicted by the USGS seismic hazard maps would materially affect the seismic safety of the MOX Facility.<sup>155</sup> While the Staff's expert, Dr. John Stamatakos, disagrees with DCS's expert, Dr. Stepp, about the general utility of USGS hazard maps,<sup>156</sup> Dr. Stamatakos does agree with Dr. Stepp that GANE fails to address the ground frequencies that would affect the safety of any PC-3 or PC-4 structures at the MOX Facility.<sup>157</sup> As Dr. Stamatakos notes, Dr. Long has failed to show how the higher hazard predicted by using the USGS maps would materially affect the seismic safety of the MOX Facility. Dr. Stamatakos claims that GANE has failed to demonstrate how the higher hazard predicted using the USGS maps would prevent DCS from complying with the regulatory requirements of 10 C.F.R. §§ 70.61(b) and 70.62(a)(2).<sup>158</sup>

As DCS argues, it is indeed incongruous for Dr. Long to disagree with the use of USGS seismic hazard maps for a specific site and then foot his purported challenge to DCS's use of 0.2g effective PGA in its seismic analysis for the MOX Facility on just such use. Necessarily, therefore, GANE's challenge to this aspect of DCS's seismic analysis does not raise a genuine issue of material fact.

Even putting to one side Dr. Long's concession that USGS seismic hazard maps should not be used for a specific site, GANE does not directly challenge, as it must to avoid summary disposition, DCS's use of a 10,000-year return period for the 0.2g PGA at the MOX Facility. Rather, GANE points to the USGS seismic hazard maps, which it did not even file as exhibits to its summary disposition opposition, and argues, in effect, that the maps suggest that DCS should have used a higher PGA. Nowhere, however, does GANE specify what the higher PGA

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<sup>152</sup> See DCS Reply at 22.

<sup>153</sup> See *id.*

<sup>154</sup> See *id.*

<sup>155</sup> See Staff Response at 12.

<sup>156</sup> See Stamatakos Aff. ¶ 27.

<sup>157</sup> See *id.* ¶ 29.

<sup>158</sup> See *id.*

should be and Dr. Long states no opinion on the matter. Similarly, Dr. Long does not directly contest DCS's assertions that the USGS hazard maps are based upon firm-rock assumptions that are inapplicable to the MOX Facility site. Rather, GANE, in effect, pleads it would need more information on the issue from the USGS maps upon which it chose to rely. Pursuant to 10 C.F.R. § 2.749(b), it is incumbent upon GANE to set forth specific supported facts directly controverting DCS's position on each of these matters in order to avoid summary disposition. Finally, and equally important, GANE has not shown how the higher hazard predicted using the USGS maps would materially affect the seismic safety of the MOX Facility for the frequencies of practical structural interest. This being so, GANE has not established any genuine issue of material fact that must be further adjudicated with respect to DCS's use of 0.2g effective PGA for the MOX Facility.

### **C. Challenge to the EPRI and LLNL PSHA Studies**

GANE also presents several challenges to DCS's use of the EPRI and LLNL PSHA studies. GANE argues that the studies are seriously out of date and not intended for site-specific use, therefore creating significant flaws in DCS's seismic analysis. Additionally, GANE asserts that the studies need to be updated to take into account important new seismological information that has arisen since the studies were performed.

#### ***1. Site-Specific Use of the Allegedly Out-of-Date EPRI and LLNL PSHA Studies***

GANE first asserts that the EPRI and LLNL PSHA studies are inappropriate for site-specific use because they are "seriously out of date,"<sup>159</sup> "conducted in the late 1970s and early 1980s,"<sup>160</sup> and "prepared more than twenty years ago."<sup>161</sup> Next GANE asserts, again relying upon Dr. Long, that the EPRI and LLNL PSHAs were never intended for site-specific use.<sup>162</sup> In this regard, Dr. Long also states that the application of the studies to a specific site was for a "first guess" before an applicant reevaluated the site's specific seismicity and attenuation relationships.<sup>163</sup> In this regard, GANE, relying upon certain language in Regulatory Guide 1.165, argues that the NRC Staff guidance "anticipates that

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<sup>159</sup> GANE Disputed Material Facts ¶ 4.

<sup>160</sup> GANE Opposition at 4.

<sup>161</sup> *Id.* at 2.

<sup>162</sup> *See* Long Tr. at 175:14-21.

<sup>163</sup> *See id.* at 175:11 to 176:1-13.

license applicants will update their use of the LLNL and EPRI studies with current site-specific information.”<sup>164</sup> Accordingly, Dr. Long claims that DCS needs to conduct a new PSHA for the MOX Facility.<sup>165</sup>

In response, DCS states, relying upon the PSHAs themselves, that GANE’s claims regarding the age of the EPRI and LLNL studies and data are off by about a decade.<sup>166</sup> DCS argues that the NRC has a longstanding history of using the EPRI and LLNL results in site-specific applications.<sup>167</sup> DCS claims that the NRC specifically allows use of the studies in Regulatory Guide 1.165 that refers to the EPRI and LLNL studies as “an accepted PSHA methodology with a range of credible alternative input interpretations” that “have been reviewed and accepted by the staff.”<sup>168</sup> Dr. Stepp, the developer of the methodology for the EPRI PSHA, asserts that he has “first hand knowledge that the EPRI PSHA outputs were expected to be used for specific sites.”<sup>169</sup> DCS contends Dr. Stepp’s grounds for his assertion are based on his specific involvement with the EPRI PSHA’s development while Dr. Long’s assertion is that he generally “remember[s] asking someone about [it]” but he “do[es] not remember who or when.”<sup>170</sup>

We conclude that GANE’s challenge that the EPRI and LLNL PSHAs are outdated and not intended for site-specific use raises no genuine issue of material fact to thwart the grant of summary disposition. Seeking to counter DCS’s statement that the PSHA studies are appropriate for site-specific use,<sup>171</sup> GANE declares in its statement of disputed material facts that the EPRI and LLNL PSHAs are seriously out of date, citing Dr. Long’s bare statement that the PSHA analyses were based upon data from the 1970s and early 1980s.<sup>172</sup> GANE’s claim, without a great deal more, does not create a material factual dispute for litigation. The PSHA studies speak for themselves<sup>173</sup> and preclude any credible claim, as GANE would have it, that the studies were prepared over 20 years ago.<sup>174</sup> Rather, as DCS states, GANE’s dates are in error by about a decade.<sup>175</sup> For example, in NUREG-1488, the 1994 publication comprising part of the LLNL PSHA, the author indicates that in 1992 and 1993 the laboratory used a revised elicitation

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<sup>164</sup> GANE Opposition at 9.

<sup>165</sup> See Long Tr. at 197:21-22 to 198:1.

<sup>166</sup> See DCS Reply at 8-9.

<sup>167</sup> See DCS Motion at 26; Stepp Aff. ¶ 39.

<sup>168</sup> See DCS Motion at 26 (quoting NRC Reg. Guide 1.165 at 2-3).

<sup>169</sup> Stepp Aff. ¶ 41.

<sup>170</sup> Long Tr. at 176:5-7; see DCS Motion at 25.

<sup>171</sup> See DCS Undisputed Material Facts ¶ 11.

<sup>172</sup> See GANE Disputed Material Facts ¶ 4; Long Aff. ¶ 9(a)(ii).

<sup>173</sup> See *supra* notes 82, 83.

<sup>174</sup> See GANE Opposition at 2.

<sup>175</sup> See DCS Reply at 9; Stepp Supplemental Aff. ¶ 15.

process to re-elicite input data from the experts on ground motion and seismicity.<sup>176</sup> Further, in the 1993 update to the original 1989 study, the authors note that one of the purposes of the re-elicitation was to “[e]nsure that the experts’ knowledge was consistent with the currently available data, theories and information.”<sup>177</sup> Indeed, the 1993 update compared, *inter alia*, the updated hazard estimates with the original estimates for six sites, one of which was the Vogtle nuclear plant site,<sup>178</sup> which is located across the Georgia border from the MOX Facility.<sup>179</sup> Hence, this GANE challenge to the PSHAs presents no genuine issue of material fact.

Similarly, the basis for Dr. Long’s claim that the EPRI and LLNL studies were not intended for site-specific use presents no genuine issue of material fact for hearing. Contrary to the requirement of 10 C.F.R. § 2.749(b) that a supported summary disposition motion must be opposed with “specific facts” showing a genuine issue of fact, GANE only relies upon the generalized recollection of Dr. Long to counter DCS’s statement of undisputed material facts that the EPRI and LLNL PSHAs are appropriate for site-specific use.<sup>180</sup> At his deposition, Dr. Long remembered asking someone about the use of the studies but he did not remember who or when. Although Dr. Long’s affidavit puts a rosier gloss upon it,<sup>181</sup> at bottom his vague recollection is insufficient to demonstrate a genuine and material dispute between the parties.

Nor is GANE’s position aided by its argument that the language of Regulatory Guide 1.165 anticipates that the PSHAs will be updated with current site-specific data.<sup>182</sup> As DCS correctly notes, even though the Regulatory Guide deals with power reactors and hence is not directly applicable to the MOX Facility, the provisions relied upon by GANE do not mandate the updating of the PSHAs with recent information.<sup>183</sup> Rather, the language relied upon by GANE states only that, when the PSHAs are used, it may be necessary to investigate and to characterize any previously unknown and uncharacterized potential seismic sources.<sup>184</sup> Here, as DCS again notes, GANE has not pointed to any previously

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<sup>176</sup> See P. Sobel, “Revised Livermore Hazard Estimates for Sixty-Nine Nuclear Power Plant Sites East of the Rocky Mountains,” NUREG-1488 (April 1994), at 2.

<sup>177</sup> J.B. Savy et al., “Eastern Seismic Hazard Characterization Update,” UCRL-ID-115111 (June 1993), at 6.

<sup>178</sup> See *id.* at 11-17.

<sup>179</sup> See Stepp Supplemental Aff. ¶ 14.

<sup>180</sup> See DCS Undisputed Material Facts ¶ 11.

<sup>181</sup> See Long Aff. ¶ 9(a)(iv).

<sup>182</sup> See GANE Opposition at 9-10.

<sup>183</sup> See DCS Reply at 15; Stepp Supplemental Aff. ¶ 22.

<sup>184</sup> See Reg. Guide 1.165 at 5 (section C.2.1).

unknown or uncharacterized potential seismic sources and the source zones it has identified already are known and characterized.<sup>185</sup>

In an attempt to bolster its argument, GANE also points to the language in the introduction to Appendix E of the Regulatory Guide concerning the evaluation of new information. Again, however, this provision states that new information need be incorporated into the PSHAs only if it would result in a significant increase in the seismic hazard for the site and is validated by a strong technical basis.<sup>186</sup> It should be noted that the section of Appendix E titled “Procedure and Evaluation” also states that “new information is considered not significant and no further evaluation is needed if it is consistent with the assumptions used in the PSHA, no additional alternative seismic sources or seismic parameters are needed, or it supports maintaining or decreasing the site median seismic hazard.”<sup>187</sup> Additionally, that section states that “[i]t is expected that the new information will be within the range of interpretations in the existing data base, and the data will not result in an increase in overall seismicity rate or increase in the range of maximum earthquakes to be used in the probabilistic analysis.”<sup>188</sup> Thus, even if Regulatory Guide 1.165 were deemed applicable, it does nothing to undercut DCS’s assertion that the EPRI and LLNL PSHAs are appropriate for site-specific use.

## ***2. Updating the EPRI and LLNL PSHA Results***

GANE next argues that the EPRI and LLNL studies must be updated to account for a plethora of new information.<sup>189</sup> DCS asserts in response that none of the information identified by GANE is new, but rather was either previously considered in the development of the MOX spectrum or does not support GANE’s conclusions.<sup>190</sup> Each argument is examined below.

### ***a. Possibility of a Large-Magnitude Earthquake Occurring in the Area of the MOX Facility***

GANE contends that the EPRI and LLNL studies did not adequately consider a paper authored in 2002 by Dr. Alan Kafka.<sup>191</sup> The paper, GANE contends,

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<sup>185</sup> See DCS Reply at 15.

<sup>186</sup> See Reg. Guide 1.165, Appendix E at E.1.

<sup>187</sup> *Id.*, Appendix E at E.3.

<sup>188</sup> *Id.*

<sup>189</sup> See GANE Opposition at 7-8; GANE Staff Response at 6.

<sup>190</sup> See DCS Motion at 29.

<sup>191</sup> See Second GANE Supplemental Interrogatory Response 3.7; A.L. Kafka, *Statistical Analysis of the Hypothesis That Seismicity Delineates Areas Where Future Large Earthquakes Are Likely To* (Continued)

suggests that there is a 30% chance that a magnitude 7.0-plus earthquake could occur virtually anywhere in South Carolina.<sup>192</sup> In other words, Dr. Long's claim posits the possibility of a large,<sup>193</sup> "floating" (i.e., randomly located) earthquake.

The Kafka study is a statistical analysis of spatial distributions of small earthquakes.<sup>194</sup> Kafka tested his theory analyzing micro and small earthquakes for the southeastern United States. For this area, which encompasses, *inter alia*, the MOX Facility, Kafka considered small earthquakes, between magnitude 2.0 and 3.0, for the period 1924 to 1987, and large earthquakes, between magnitude 3.0 and 4.8, for the period between 1988 and 2001.<sup>195</sup> Kafka concluded that 60% of the "large" earthquakes (i.e., between magnitude 3.0 and 4.8) in the southeastern United States had epicenters located within 30 kilometers of where small earthquakes occurred.<sup>196</sup>

It is the comparison between the small and larger earthquakes, DCS argues, that led GANE to conclude that Kafka's analysis shows a 30% or greater chance that a magnitude 7.0-plus earthquake could appear anywhere.<sup>197</sup> DCS states that the EPRI and LLNL PSHAs did take into account the possibility of a major earthquake.<sup>198</sup> Thus, DCS asserts, GANE's reliance upon Kafka's theory does not present any new information.<sup>199</sup> Indeed, DCS states that Dr. Long admitted in his deposition that a large earthquake was considered by at least one expert in the EPRI and LLNL PSHAs.<sup>200</sup> DCS further states that NRC guidelines allow the use of the EPRI and LLNL studies without reweighing epicenters because both PSHAs are NRC-accepted methodologies for site-specific use.<sup>201</sup>

Further, DCS argues, Kafka's paper did not consider any earthquake above a magnitude 4.8 in the southeastern United States, and therefore is not relevant to the MOX Facility's seismic design.<sup>202</sup> It claims that Kafka's work has no demonstrated

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*Occur in the Central and Eastern United States*, 73 Seismological Research Letters 992-1003 (Nov./Dec. 2001) [hereinafter Kafka].

Even though GANE did not see fit to include the Kafka paper as an exhibit to its opposition to DCS's motion for summary disposition, we nevertheless were able to unearth a copy.

<sup>192</sup> See Second GANE Supplemental Interrogatory Response 3.7.

<sup>193</sup> Kafka, for purposes of his study, considered a "large" earthquake as one with a magnitude between 3.0 and 4.8.

<sup>194</sup> See Kafka at 992-1003.

<sup>195</sup> See *id.* at 993 and Fig. 1.

<sup>196</sup> See *id.*, Table 1.

<sup>197</sup> See DCS Motion at 31-32.

<sup>198</sup> See *id.* at 30.

<sup>199</sup> See *id.*

<sup>200</sup> See *id.*; see also Long Tr. at 360:7-16, 15:19-22.

<sup>201</sup> See DCS Motion at 25-28; Stepp Supplemental Aff. ¶ 21.

<sup>202</sup> See DCS Motion at 31.

applicability to a major earthquake on the South Carolina Coastal Plain<sup>203</sup> and that his data set considered smaller earthquakes only after 1924, thus excluding the 1886 Charleston earthquakes and all the paleoearthquakes associated with the Charleston Seismic Zone.<sup>204</sup> The paper also ignored, as Dr. Long admits,<sup>205</sup> all known geologic/liquefaction features associated with the South Carolina Coastal Plane,<sup>206</sup> which reveal earthquake occurrences over the past 6000 years. Based on this analysis, DCS argues, none of the earthquakes used by Kafka is of a magnitude to be of concern for the seismic design of the MOX Facility.<sup>207</sup> Dr. Stepp concludes that he believes Kafka's results cannot be reasonably extrapolated to predict the expected location of "truly large and major earthquakes."<sup>208</sup> According to Dr. Stepp, Kafka's use of relatively small earthquakes that could occur anywhere are of no importance to the seismic design of the MOX Facility.<sup>209</sup> Rather, he asserts that the earthquakes that should be considered for the MOX Facility are magnitude 5.0 or higher, and these earthquakes were incorporated into the EPRI PSHA.<sup>210</sup>

The Staff agrees with DCS. Its expert, Dr. Stamatakos, states that Kafka's paper was about small earthquakes.<sup>211</sup> Dr. Stamatakos asserts that Dr. Long has provided no support to justify extrapolating data from small earthquakes as a forecast for large ones.<sup>212</sup>

In his paper, Kafka concludes from his comparison of small and large earthquakes between magnitude 3.0 and 4.8 that, at the 95% level of statistical confidence, it can be inferred that more than 71% of large earthquakes in a region will tend to occur near previous small earthquakes.<sup>213</sup> This statement apparently is the basis for GANE's belief that Kafka's paper supports the idea that 30% of the large earthquakes in the central and eastern United States can occur anywhere. As both DCS and the Staff note, Dr. Long fails to explain how, or why, he extrapolates Kafka's examination of the spatial variability of small earthquakes to include earthquakes of very large magnitude. In order for an expert's opinion to be admissible, the expert's opinion must be based on the "methods and procedures

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<sup>203</sup> See *id.* at 32; Stepp Aff. ¶ 44.

<sup>204</sup> See DCS Motion at 32; Stepp Aff. ¶ 45.

<sup>205</sup> See Long Tr. at 364:8-11.

<sup>206</sup> See DCS Motion at 32-33.

<sup>207</sup> See Stepp Aff. ¶ 45.

<sup>208</sup> *Id.* ¶ 46.

<sup>209</sup> See *id.* ¶ 45.

<sup>210</sup> See *id.* ¶ 46.

<sup>211</sup> See Stamatakos Aff. ¶¶ 16-18.

<sup>212</sup> See *id.*

<sup>213</sup> See Kafka at 1001.



of science’ rather than on ‘subjective belief or unsupported speculation.’<sup>214</sup> Further, an expert’s opinion must be based on sufficient facts or data, to be the product of reliable principle and methods that the witness applied to the facts of the case.<sup>215</sup> Because Dr. Long fails to provide any link between Kafka’s analysis of a select data set of smaller earthquakes and his conclusion that Kafka’s analysis is applicable to very large, floating earthquakes occurring near the MOX Facility, his opinion fails to meet the standards set forth in *Daubert* and Rule 702 of the Federal Rules of Evidence. Accordingly, in these circumstances his opinion does not raise a genuine issue of material fact in need of resolution by further informal hearing procedures.

*b. Consideration of a 7.5 Magnitude Earthquake in the Eastern Tennessee Seismic Zone*

Relying on Dr. Long’s opinion, GANE argues that the EPRI and LLNL studies did not adequately and quantitatively consider that a magnitude 7.5 earthquake could occur in the Eastern Tennessee Seismic Zone.<sup>216</sup> GANE asserts “[i]n particular, a New Madrid type Event (Magnitude 7.5) should be considered for southeastern Tennessee for evaluation of potential effects on the Savannah River Site.”<sup>217</sup> GANE contends that if this new information were taken into account, it would likely lead to an increase in the ground motions for the MOX Facility’s seismic hazard spectra.<sup>218</sup>

DCS contends that it is undisputed that the EPRI and LLNL PSHA studies included the possibility of a 7.5 earthquake in southeastern Tennessee, with at least one interpretation in both studies placing a 7.5 earthquake in the Eastern Tennessee Seismic Zone.<sup>219</sup> Additionally, DCS asserts that it is not generally accepted that a 7.5 magnitude earthquake could occur in this zone.<sup>220</sup> Southeast Tennessee frequently has small earthquakes, but none have been above a moment magnitude greater than about 5.0.<sup>221</sup> According to Dr. Stepp, the geophysical structure underlying the Eastern Tennessee Seismic Zone is unlikely to support magnitude 7.0-plus earthquakes<sup>222</sup> and Dr. Stepp’s opinion, DCS claims, is consistent with the views generally accepted in the scientific community regarding this seismic

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<sup>214</sup> *Daubert*, 509 U.S. at 589-90.

<sup>215</sup> See Fed. R. Evid. 702.

<sup>216</sup> See GANE Opposition at 11-12; Long Aff. ¶ 37.

<sup>217</sup> Second GANE Interrogatory Response 3.45(a).

<sup>218</sup> See *id.* 3.45(c).

<sup>219</sup> See DCS Undisputed Material Facts ¶ 22; DCS Motion at 33-34; Stepp Aff. ¶ 48.

<sup>220</sup> See DCS Undisputed Material Facts ¶¶ 23-24; DCS Motion at 34.

<sup>221</sup> DCS Undisputed Material Facts ¶ 23; Stepp Aff. ¶ 49.

<sup>222</sup> See Stepp Aff. ¶ 50.

zone.<sup>223</sup> Further, DCS notes that Dr. Long himself admits that he is “a bit of an outlier” in his opinion.<sup>224</sup> The NRC Staff argues that Dr. Long has provided no basis for his opinion that such an earthquake would occur.<sup>225</sup>

In expressing his opinion that a large, 7.0-plus magnitude earthquake could occur in the Eastern Tennessee Seismic Zone and hence should be taken into account for the MOX Facility’s seismic hazard spectra, Dr. Long fails to provide a factual foundation for his assertion that such an earthquake could occur. To oppose a motion for summary disposition, mere bare assertions, even assertions by an expert, without a fully explained factual basis are insufficient to create a genuine and material factual dispute.<sup>226</sup> Accordingly, Dr. Long’s unsupported opinion is insufficient to defend against a motion for summary disposition.

*c. Consideration of Additional Epicenters for Charleston-Type Earthquakes*

GANE claims that DCS did not take into account recent paleoseismic work on the South Carolina Coastal Plain that it asserts shows more seismic activity in the last 6000 years and over a wider area than previously known.<sup>227</sup> GANE states that two other locations in South Carolina, Bluffton and Georgetown, also were epicenters for Charleston-like earthquakes occurring over the past 6000 years, and that DCS did not consider this new information in its seismic analysis. For support, GANE relies on the opinion of Dr. Long and an article published in 2001 by P. Talwani and W. Schaeffer discussing paleoliquefaction along the South Carolina Coastal Plain.<sup>228</sup>

DCS argues that the work of Talwani and Schaeffer discusses recurrence rates of large earthquakes on the South Carolina Coastal Plain, not their location.<sup>229</sup> In relation to the recurrence rates, the authors also discuss two scenarios to explain the location of paleoliquefaction data.<sup>230</sup> In one scenario, Talwani and Schaeffer place the epicenters of all earthquakes near Charleston, South Carolina.<sup>231</sup> In

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<sup>223</sup> See DCS Undisputed Material Facts ¶ 24; DCS Motion at 35; Stepp Aff. ¶ 50.

<sup>224</sup> See DCS Motion at 34; Long Tr. at 159:1-5.

<sup>225</sup> See Staff Response at 10; Stamatakos Aff. ¶¶ 19-20.

<sup>226</sup> See *Advanced Med. Sys., Inc.*, CLI-93-22, 38 NRC at 102; *Allens Creek*, ALAB-629, 13 NRC at 78; *Virginia Electric and Power Co.* (North Anna Nuclear Power Station, Units 1 and 2), ALAB-584, 11 NRC 451, 453, 455 (1980); *Yankee Nuclear*, LBP-96-18, 44 NRC at 103.

<sup>227</sup> See Revised GANE Contention 3 at 1.

<sup>228</sup> See P. Talwani & W. Schaeffer, *Recurrence rates of large earthquakes in the South Carolina Coastal Plain based on paleoliquefaction data*, 106, No. B4, *Journal of Geophysical Research* 6621-42 (Apr. 10, 2001) [hereinafter Talwani & Schaeffer].

<sup>229</sup> See DCS motion at 36 (citing Talwani & Schaeffer at 6621-42).

<sup>230</sup> See *id.* at 36-37 (citing Talwani & Schaeffer at 6621).

<sup>231</sup> See *id.* at 37 (citing Talwani & Schaeffer at 6641).

the other scenario they place the epicenters in South Carolina near Bluffton, Georgetown, and Charleston.<sup>232</sup> In the first sentence of the article abstract, Talwani and Schaeffer state that they “present a reanalysis of results of 15 years of paleoliquefaction investigations in the South Carolina Coastal Plain.”<sup>233</sup> DCS notes, therefore, that the two scenarios discussed in the article are not new.<sup>234</sup>

Further, DCS asserts that the two scenarios Talwani and Schaeffer explore were raised a decade earlier in an NRC document that Talwani and Schaeffer cite.<sup>235</sup> It explains that in 1990 the authors of NUREG/CR-5613 examined and identified several liquefaction features in the same areas as the Bluffton and Georgetown locations identified by Talwani and Schaeffer.<sup>236</sup> According to DCS, that document offers an explanation for the presence of liquefaction features located in those areas, including that the earthquake epicenters could have been outside of Charleston.<sup>237</sup> Further, DCS notes that Dr. Long concedes that Talwani and Schaeffer’s opinions are not new.<sup>238</sup>

DCS also asserts that the earthquake epicenters located along coastal South Carolina, but outside of Charleston, provided by Talwani and Schaeffer and NUREG/CR-5613, were considered in the seismic design of the MOX Facility.<sup>239</sup> Additionally, the EPRI and LLNL studies included alternative evaluations that major earthquakes could occur practically anywhere along the eastern United States.<sup>240</sup> DCS concludes, therefore, that Talwani and Schaeffer did not present any new information regarding locations of earthquakes in coastal South Carolina that DCS needs to consider.<sup>241</sup> DCS argues, however, that even if the information was deemed new, GANE has not shown that the consideration of these new locations would increase the predicted ground motion of the design earthquake for the MOX Facility.<sup>242</sup> Finally, DCS notes that even Dr. Long admits that “it may or may not change any of the results,”<sup>243</sup> and that he had “conducted no independent analyses to suggest the seismic hazard would increase.”<sup>244</sup>

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<sup>232</sup> See *id.* (citing Talwani & Schaeffer at 6621).

<sup>233</sup> See *id.*

<sup>234</sup> See DCS Motion at 37.

<sup>235</sup> See *id.* (citing Talwani & Schaeffer at 6641).

<sup>236</sup> See *id.* (citing D. Amick et al., “Paleoliquefaction Features Along the Atlantic Seaboard,” NUREG/CR-5613 (1990), at 77, Fig. 10.2 [hereinafter NUREG/CR-5613]).

<sup>237</sup> See *id.* at 37-38 (citing NUREG/CR-5613 at 98, 117).

<sup>238</sup> See *id.* at 38; Long Tr. at 257:15-20.

<sup>239</sup> See DCS Motion at 38.

<sup>240</sup> See *id.*; Long Tr. at 256:10-18.

<sup>241</sup> See DCS Motion at 39.

<sup>242</sup> See *id.*

<sup>243</sup> See *id.*; Long Tr. at 272:19 to 273:1, 316:7-13.

<sup>244</sup> See DCS Motion at 39; Long Tr. at 45:7-11.

For its part, the Staff states that the Talwani and Schaeffer scenarios were considered in NUREG/CR-5613, which in turn were considered in the seismic design of the MOX Facility.<sup>245</sup> Moreover, the Staff notes, neither Bluffton nor Georgetown is any closer to the SRS than the 120-kilometer distance DCS used as the modeled historical check.<sup>246</sup> Thus, GANE's claim, even if accurate, lacks materiality.<sup>247</sup>

We conclude that GANE's claim does not preclude summary disposition for several reasons. First, DCS has clearly established that the scenarios detailed in Talwani and Schaeffer were considered previously, and thus are not new material that needs to be considered. Second, the information set out in Talwani and Schaeffer was included in NUREG/CR-5613, which was considered in the EPRI and LLNL PSHA studies. Third, as the Staff correctly notes, neither Bluffton nor Georgetown is any closer to the SRS than the 120-kilometer distance used by DCS for the modeled historic check, so GANE's claim fails to present a genuine issue of material fact. It is not enough that the nonmoving party merely allege an issue of fact; rather, the issue of fact must be material. In order to be material, the fact must be able to affect the outcome of the case. Here, GANE's claim, even if accepted, would have no effect on the outcome of the case, and thus it fails to create a genuine issue of fact that must be resolved.

*d. Shorter Recurrence Intervals of Charleston-Type Earthquakes*

GANE also relies on Talwani and Schaeffer to support its argument that the recurrence interval for characteristic Charleston earthquakes along coastal South Carolina is much shorter than previously considered in the EPRI and LLNL studies.<sup>248</sup> GANE notes that one scenario that Talwani and Schaeffer present calls for a magnitude 7.0-plus Charleston earthquake occurring in the last 6000 years with a recurrence interval of 600 years.<sup>249</sup>

DCS argues that the hypothesis of a 600-year interval is not new. The 600-year return interval was discussed in NUREG/CR-5613, published more than a decade before Talwani and Schaeffer, which was in turn included in the seismic design of the MOX Facility.<sup>250</sup> DCS claims that because information GANE refers to is not new, it fails to justify GANE's call for the need to update the EPRI and LLNL PSHAs.<sup>251</sup>

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<sup>245</sup> See Staff Response at 11.

<sup>246</sup> See *id.*

<sup>247</sup> See *id.*

<sup>248</sup> See GANE Contention 3 at 14.

<sup>249</sup> See *id.* (citing Talwani & Schaeffer at 6641).

<sup>250</sup> See DCS Motion at 40.

<sup>251</sup> See *id.* at 28-29.

GANE responds by arguing that DCS does not explain to what extent the EPRI and LLNL PSHA studies took into account the 600-year return interval mentioned by Talwani and Schaeffer and NUREG/CR-5613.<sup>252</sup> GANE claims that it was not enough that the information was “considered.” Dr. Long attacks the EPRI and LLNL PSHAs by asserting that they are outdated and if reexamined today, they possibly would result in a higher seismic hazard at the Savannah River Site.<sup>253</sup>

DCS counters first by noting that GANE does not deny that the information is not new,<sup>254</sup> and then by asserting that the EPRI and LLNL PSHAs only need to be reevaluated if new models or data suggest a major departure in the PSHA results.<sup>255</sup> As Dr. Stepp explains, the EPRI and LLNL PSHA studies, conducted a decade later than Dr. Long asserts, were designed to include uncertainties to account for both incomplete data and evolving knowledge.<sup>256</sup> Dr. Stepp asserts that it is fundamental to the performance of a PSHA that its developers estimate annual non-exceedance frequencies of ground motions with some degree of uncertainty.<sup>257</sup> Accordingly, an objective of both PSHAs was to obtain a robust quantification of this uncertainty for power plant sites in the central and eastern United States.<sup>258</sup> Experts’ varying interpretations of data are accounted for in the final quantitative determinations in the PSHAs resulting in a robust set of PSHA results expected to withstand the test of time, new data, models, or interpretations.<sup>259</sup> Dr. Stepp concludes the studies have proven so robust that reevaluation has been unnecessary.<sup>260</sup>

Because the PSHAs considered the shorter recurrence interval of 600 years, we conclude that GANE fails to raise “new” information that must be considered. In addition, GANE’s analysis that the studies need to be recomputed to account for the new information lacks merit because, as Dr. Stepp has clearly explained, the EPRI and LLNL studies encompass various interpretations of data that existed at the time the studies were done, such as NUREG/CR-5613, and are robust enough in design to encompass any new data that may be received for years to come, absent any new data or models suggesting a major departure in PSHA results.<sup>261</sup> Therefore, GANE’s assertion regarding the extent to which the 600-year recurrence interval was considered in the EPRI and LLNL PSHAs is quantitatively

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<sup>252</sup> See GANE Opposition at 11-12; Long Aff. ¶ 41.

<sup>253</sup> See Long Aff. ¶ 9(a).

<sup>254</sup> See DCS Reply at 18.

<sup>255</sup> See Stepp Supplemental Aff. ¶ 20.

<sup>256</sup> See *id.* ¶¶ 15, 17.

<sup>257</sup> See *id.* ¶ 18.

<sup>258</sup> See *id.*

<sup>259</sup> See *id.* ¶ 19.

<sup>260</sup> See *id.* ¶ 20.

<sup>261</sup> See *id.*

irrelevant and hence immaterial. Dr. Long has provided no analysis demonstrating or explaining why consideration of the 600-year recurrence interval would result in a higher seismic hazard at the Savannah River Site than the recurrence interval projected using the EPRI and LLNL PSHAs. In light of this, and Dr. Stepp's explanation of the uncertainty inherent in a PSHA, GANE has failed to present a genuine issue of material fact needing resolution by informal hearing procedures.

*e. Increased Magnitude of Historical Earthquake on the South Carolina Coastal Plain*

GANE argues that magnitudes of historical earthquakes in the South Carolina Coastal Plain may have been much greater than previously considered by the EPRI and LLNL studies. To support this claim, GANE relies on the opinion of Dr. Long, who, in turn, relies on two articles discussing a recent study of paleoliquefaction data on the South Carolina Coastal Plain authored by Ke Hu, Sarah Gassman, and Pradeep Talwani.<sup>262</sup>

DCS claims, however, that these studies are no longer valid. In that regard, Dr. Stepp asserts that the studies are flawed "because they did not consider how aging affects soil strength."<sup>263</sup> The conclusions in the first article, of which Ke Hu is the primary author, are in error Dr. Stepp argues, because the authors, by their own admission, did not correct the soil strength to account for aging.<sup>264</sup> According to Dr. Stepp, this is "significant because old soil deposits are more resistant to liquefaction than younger deposits."<sup>265</sup> Consequently, DCS states that the estimates of earthquake magnitudes drawn from liquefaction features made in the second article, of which Ke Hu is also the primary author, would have to be lowered to correct for soil aging.<sup>266</sup> Further, DCS claims that GANE's expert, Dr. Long, cannot dispute these findings because Dr. Long, by his own admission, is not an expert in how soil affects the magnitude of an earthquake and thus cannot proffer an expert opinion on this matter.<sup>267</sup> Further, DCS asserts that Dr.

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<sup>262</sup> See Second GANE Supplemental Interrogatory Response, General Interrogatory 3; see also Ke Hu, Sarah L. Gassman, and Pradeep Talwani, *Magnitudes of Prehistoric Earthquakes in the South Carolina Coastal Plain from Geotechnical Data*, 73, No. 6, Seismological Research Letters 979-91 (2002); Ke Hu, Sarah L. Gassman, and Pradeep Talwani *In Situ Properties of Soils at Paleoliquefaction Sites in the South Carolina Coastal Plain*, 73, No. 6, Seismological Research Letters 964-78 (2002).

<sup>263</sup> See Stepp Aff. ¶ 61.

<sup>264</sup> See *id.*; DCS Motion at 43.

<sup>265</sup> DCS Motion at 42.

<sup>266</sup> See *id.*

<sup>267</sup> See *id.* at 43; Long Tr. at 278:21, 280:19-22.

Long provides no independent analysis to support or rehabilitate the discredited article.<sup>268</sup>

Dr. Stepp seriously undermines the credibility of the Hu papers. While GANE does not agree with DCS's characterization of the articles, it fails directly to rebut DCS's claim that the articles do not account for the soil age and its effect on magnitude. In order to create a genuine issue of material fact, GANE must directly refute DCS's technical criticism of the paper set forth in paragraphs 39 and 40 of DCS's Undisputed Material Facts. Dr. Long is unable to rehabilitate the article because he is not an expert in soil properties. Similarly, he provides no independent analysis to support the paper. Thus, the only evidence proffered to present a genuine issue of material fact has been discredited. Dr. Long acknowledges that he is not an expert in how soil properties affect earthquake magnitudes. Had GANE produced an expert in the geotechnical properties of soil who could affirm the earthquake magnitude estimates in the articles that GANE relies upon are still valid, then this would generate a genuine issue of material fact; but, with no evidence to show that the estimates in the papers are still technically valid, GANE fails to generate a genuine issue of material fact.

*f. Consideration of New Ground Motion Attenuation Models*

GANE contends that the EPRI and LLNL studies did not adequately consider recent attenuation models that more accurately model postcritical reflection — also known as the Moho Bounce. GANE states that, while it generally agrees with DCS's approach in computing the PSHA,<sup>269</sup> DCS's reliance fell short when it did not take into account recent studies providing more detailed and site-specific information. Because of this failure, GANE claims DCS has "underestimated the amplitude of the design basis earthquake at the Savannah River Site."<sup>270</sup> GANE further contends that the EPRI and LLNL PSHAs "did not appropriately model the attenuation of earthquake amplitude over a distance of approximately 110 kilometers . . . because they assumed uniform decay of amplitude over that distance."<sup>271</sup> Dr. Long identified one ground motion attenuation model that DCS should have considered: Atkinson and Boore.<sup>272</sup> Dr. Long claims that if Atkinson and Boore had been used, it would increase the amplitude at the MOX Facility from a factor of two to four.<sup>273</sup>

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<sup>268</sup> See DCS Motion at 43.

<sup>269</sup> See Third GANE Supplemental Interrogatory Response 3.30; Long Tr. at 135:8-22 to 136:1-13.

<sup>270</sup> See Second GANE Supplemental Interrogatory Response, General Interrogatory 3.

<sup>271</sup> See Third GANE Supplemental Interrogatory Response 3.6.

<sup>272</sup> See G.M. Atkinson and D.M. Boore, *Ground-Motion Relations for Eastern North America*, 85, No. 1, BSSA 17-30 (Feb. 1995).

<sup>273</sup> Long Tr. at 46:20-22 to 47:1-4.

In response, DCS first notes that GANE relies solely on the bare assertion of Dr. Long, who provided no data or analysis to support his assertion that if DCS had considered Atkinson and Boore it would have altered the amplitude at the MOX facility.<sup>274</sup> Further, the EPRI and LLNL studies include assessments of uncertainty in ground motion attenuation that adequately consider Atkinson and Boore.<sup>275</sup> DCS cites several attenuation models that have been published since Atkinson and Boore, and notes that it appears that GANE favors Atkinson and Boore because it presents a model that exhibits pronounced nonuniform decay to account for the Moho Bounce.<sup>276</sup> DCS asserts that it is unclear why consideration of Atkinson and Boore would materially affect the seismic design of the MOX facility.<sup>277</sup> First, the consideration of the Moho Bounce in a PSHA is different than its consideration for a ‘‘historical check.’’<sup>278</sup> The PSHA weighs multiple earthquakes at multiple distances and azimuths with respect to a particular location.<sup>279</sup> Many of these locations, DCS notes, are not within the distance range in which the Moho Bounce would occur.<sup>280</sup> Consequently the Moho Bounce, and thus Atkinson and Boore, would not be applicable for these potential earthquake locations.<sup>281</sup>

DCS argues that, even if GANE could somehow show how Atkinson and Boore applied to the MOX Facility, that application would be irrelevant because the EPRI and LLNL PSHAs envelope the Atkinson and Boore model.<sup>282</sup> Dr. Stepp states that the EPRI and LLNL PSHAs encompass a large range of uncertainty and the Atkinson and Boore model falls within the range of uncertainties.<sup>283</sup> For a moment magnitude 7.0 earthquake at a distance of 100 kilometers, the Atkinson and Boore model produces results in accelerations and frequencies similar to the other attenuation models used in the EPRI and LLNL PSHAs.<sup>284</sup>

Because consideration of the attenuation models that incorporate the possible effects of a Moho Bounce would not materially affect the seismic design of the proposed MOX Facility, we conclude that this issue fails to generate a genuine issue of material fact. In his analysis, Dr. Stepp compared the Atkinson and Boore model to the models used in the EPRI and LLNL PSHAs and found that the Atkinson and Boore model did not vary from the other attenuation models.

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<sup>274</sup> See DCS Reply at 20.

<sup>275</sup> See DCS Motion at 45.

<sup>276</sup> See *id.*; Stepp Aff. ¶¶ 66-67; Long Tr. at 424:15 to 425:6.

<sup>277</sup> See DCS Motion at 45; Stepp Aff. ¶ 69.

<sup>278</sup> See DCS Motion at 45; Stepp Aff. ¶ 69.

<sup>279</sup> See DCS Motion at 45; Stepp Aff. ¶ 69.

<sup>280</sup> See DCS Motion at 46; Stepp Aff. ¶ 69.

<sup>281</sup> See DCS Motion at 46.

<sup>282</sup> See DCS Motion at 46; Stepp Aff. ¶ 71.

<sup>283</sup> See Stepp Aff. ¶ 71.

<sup>284</sup> See *id.*



Dr. Long provides no analysis to counter Dr. Stepp's opinion. Bare assertions and general denials are insufficient to defeat a well-supported motion for summary disposition. Similarly, the mere citation to the published work of another will not defend against summary disposition. Hence, GANE's arguments fail to generate a genuine issue of material fact with respect to the Moho Bounce.<sup>285</sup>

## VII. CONCLUSION

GANE fails to present a genuine issue of material fact with respect to contention 3. After thoroughly examining its arguments concerning the adequacy of the historical check, computation of the effective PGA to determine the horizontal ground surface spectrum, and various arguments against the site-specific use of the EPRI and LLNL PSHAs, we find that GANE has failed to raise a genuine issue of material fact to defend against DCS's motion for summary disposition. Consequently, DCS's summary disposition motion of contention 3 is granted.

It is so ORDERED.

THE ATOMIC SAFETY AND  
LICENSING BOARD<sup>286</sup>

Thomas S. Moore, Chairman  
ADMINISTRATIVE JUDGE

Dr. Charles N. Kelber  
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
February 2, 2005

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<sup>285</sup> See 10 C.F.R. § 2.749(b); see also *Allens Creek*, ALAB-629, 13 NRC at 78; *Rohrbough by Rohrbough v. Wyeth Lab., Inc.*, 719 F. Supp. at 475.

<sup>286</sup> 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  
**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**

**RULES OF PRACTICE: REOPENING OF RECORD (NEW CONTENTIONS)**

In determining whether to reopen the evidentiary record for a hearing on a new contention not previously considered, the Licensing Board follows the test established by the former Appeal Board. *See Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-138, 6 AEC 520 (1973). Specifically, this test states 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.” *Id.* at 523.

In effect, the *Vermont Yankee* Appeal Board was indicating that, after the record has been closed, the standards governing contention admissibility and those governing summary disposition can, and should, be conflated.

**NEPA: SCOPING (CUMULATIVE IMPACTS)**

The National Environmental Policy Act (NEPA) requires, under its “cumulative impacts” rubric, that an agency take into account reasonably foreseeable

results of current federal actions, and imposes a rule against incrementalism, that is, against analyzing a succession of contemplated federal actions in a series, as separate, unrelated activities. *See* 40 C.F.R. § 1508.7; 10 C.F.R. § 51.14(b); *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n.20 (1976). In other words, the scope of the NEPA analysis requires that a project, including its definite follow-ons, be fairly defined. *See* 40 C.F.R. §§ 1501.7, 1508.25.

#### **NEPA: CONSIDERATION OF ALTERNATIVES**

NEPA requires that an agency evaluate alternatives to the proposed federal action. In the context of the transportation of nuclear waste, an alternative that requires nuclear waste to be shipped cross-country from the originating reactor to a temporary storage facility, back cross-country to the originating reactor for “recontainerization,” and back again cross-country to a permanent repository seems far less attractive than an alternative that requires only shipment from the originating reactor cross-country to a temporary storage facility, then to a nearby permanent repository all in the same container.

#### **NEPA: CONSIDERATION OF ALTERNATIVES**

The Licensing Board recognizes the importance of minimizing the number of times spent fuel canisters are transferred from one cask to another, and that it is even more important to minimize the number of times bare fuel bundles are switched from one canister to another, as well as the number of times spent fuel canisters are shipped cross-country.

#### **RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)**

A licensing board cannot admit to a proceeding a contention formulated as a bare assertion without factual underpinning. *See* 10 C.F.R. § 2.714(b)(2)(ii); LBP-98-7, 47 NRC 142, 178, 180-81 (1998). An examination of the documents submitted by the State of Utah, the Applicant, and the NRC Staff with regard to the newly filed contention make clear that there is inadequate factual support for the proposition that the Department of Energy will not accept spent nuclear fuel from the Applicant in sealed canisters.

## **NUCLEAR REGULATORY COMMISSION: EFFECT OF OTHER AGENCY DECISIONS**

Applicants are not required to have all other permits in hand before they can receive an NRC license; they are instead allowed to pursue in parallel the many permits and licenses necessary to go forward with a proposal.

### **MEMORANDUM AND ORDER (Ruling on State of Utah's Recently Filed Contention UU)**

Toward the end of last year, this proceeding — concerning the license application of the Private Fuel Storage (PFS) consortium for its proposed temporary spent nuclear fuel storage facility in Skull Valley, Utah — was seemingly headed to a long-awaited conclusion after a lengthy hearing on the last remaining issue in the case, namely, the degree of potential risk from accidental military jet crashes. On November 12, however, the State of Utah asked us to consider a new contention, designated Utah UU.

That contention was premised on an oral statement assertedly made, a month earlier, by a U.S. Department of Energy (DOE) official concerning the long-term fate of any spent fuel sealed at, and transported from, nuclear power plants around the country for temporary storage at the proposed PFS facility. As the State recounted and understood that statement, it was to the effect that such PFS-stored fuel would later be ineligible for disposal at the proposed Yucca Mountain permanent repository, unless it were first to be unsealed and repackaged elsewhere.

The asserted statement seemed on its face incongruent with a common understanding about the role of the proposed PFS facility held by, among others, the Commissioners who head this agency. Specifically, the Commission recently spoke of what has long been an underlying assumption about the PFS project: that the Applicant “*plans to completely seal spent fuel inside a canister that is never opened from the time it leaves the power plant until it is deposited into a permanent repository . . .*” CLI-04-22, 60 NRC 125, 132 (2004) (emphasis added).

More than one of our decisions has reflected a similar understanding. For example, in our Partial Initial Decision on seismic issues, we had described the facility as “intended to serve as the spent fuel’s way station before the coming

to fruition of the permanent underground repository long planned for Nevada's Yucca Mountain."<sup>1</sup>

Both the Applicant and the NRC Staff have presented a variety of grounds opposing our admission of the new State contention at this stage of the proceeding. In simple terms, those grounds challenge Contention Utah UU as not material to the issues before us, for lacking a factual underpinning, and for not meeting various standards relating to the timing of its filing.<sup>2</sup>

We discuss all those grounds in the course of determining that *we must reject the contention (and the motion to reopen the record) because its factual underpinning is inadequate. The underpinning provided is essentially the State's interpretation of an "unofficial" oral opinion by a DOE Office Director who is not directly responsible for the subject about which he spoke. That opinion, when measured against key "official" DOE documents brought to our attention that portray the matter differently, is insufficient to launch a new adjudicatory inquiry at this juncture.*

Accordingly, we need reach no firm conclusion on the other grounds advanced for rejecting the contention. But the analysis we do make of those grounds indicates that if the oral statement that launched the new contention were to have signified what the State thought it did upon hearing it, then the new contention might well have required further inquiry.

In Part I below, we discuss the factual and procedural background that led to the issue now before us. In Part II, we discuss the legal standards governing our decision. In Part III, we explain our ruling rejecting the admissibility of the new contention, and conclude by informally commending the matter to the Commission for such consideration as it deems appropriate.

## I. THE FACTUAL AND PROCEDURAL BACKGROUND

In August and September of last year, we conducted what the parties expected to be the final phase of the evidentiary hearings in this proceeding, regarding the probability of a spent fuel cask/canister breach (and resulting radiation release) should an F-16 jet fighter plane accidentally crash into the proposed PFS facility.

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<sup>1</sup> LBP-03-8, 57 NRC 293, 296 (2003). *See also* LBP-01-40, 54 NRC 526, 531 (2001) (discussing PFS's "Start Clean — Stay Clean" policy as including "seal-welded, never-to-be-opened spent nuclear fuel (SNF) canisters"). In this regard, the Applicant's current advertising for the facility (brought to our attention by the State), while not pointing as we did to Yucca Mountain specifically, does indicate that those storing fuel at the PFS site would have "preparation for outbound shipment to DOE provided." *See* State of Utah's Request for Admission of Late-Filed Contention Utah UU (Ramifications of DOE's Refusal To Accept Fuel in Welded Canisters from the PFS Site) or in the Alternative Petition for Rulemaking, Exh. 8, PFS Advertisement (Nov. 12, 2004).

<sup>2</sup> Only the Staff, not the Applicant, claims the contention is untimely.

Upon coming to the end of the final day of that hearing on September 15, we closed the taking of evidence.<sup>3</sup>

Nearly 2 months later, we received the State's request to admit a new contention for consideration on its merits in this proceeding. The newly filed contention, denominated "Utah UU — Ramifications of DOE's Refusal To Accept Fuel in Welded Canisters from the PFS Site," was framed by the State as follows:

PFS's license application and NRC's final environmental impact statement fail to describe or analyze the effect of DOE's refusal to collect fuel in welded canisters from the PFS site and the concomitant potential to create a dysfunctional national waste management system, and added risks and costs from multiple and unnecessary fuel shipments back and forth across the country. In addition, absent a condition that fuel will only be accepted at PFS's Skull Valley site if it can be shipped directly from PFS to a permanent repository, PFS must provide reasonable assurance that each and every fuel owner will accept the fuel back for repackaging, and PFS or the fuel owner will place, up-front in an escrow account, sufficient funds to cover the cost of fuel shipment back to the reactor or other facility for repackaging.

State of Utah's Request for Admission of Late-Filed Contention Utah UU (Ramifications of DOE's Refusal To Accept Fuel in Welded Canisters from the PFS Site) or in the Alternative Petition for Rulemaking (Nov. 12, 2004) at 2 [hereinafter State Motion].

As discussed in further detail below, the former version of the NRC rules (under which this proceeding continues to be conducted) requires that a party provide, among other things, factual support for each contention it proffers. *See* 10 C.F.R. § 2.714(b)(2)(ii). In this vein, the State appended to its motion several exhibits, which it contends provided support for the assertion that DOE would not accept at Yucca Mountain any sealed spent fuel canisters or, for that matter, pick up any spent nuclear fuel from the PFS facility at all.

The principal foundation for the State's new contention is an affidavit of Dianne R. Nielson, Executive Director of the Utah Department of Environmental Quality, elaborating on her recollection of an October 14 conversation she had with Gary Lanthrum, Director of DOE's Office of National Transportation, at a meeting in Salt Lake City of the Nuclear Waste Technical Review Board.<sup>4</sup>

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<sup>3</sup> *See* Tr. at 19700 (where the Board Chairman noted "that concludes our record in the case"); *compare* 10 C.F.R. Part 2, App. A, § V(g)(5) ("The Chairman should formally close the hearing").

<sup>4</sup> This conversation, as well as similar statements allegedly made by Mr. Lanthrum to members of the local Utah press, provides the foundation upon which much of the State's argument is based, and around which much of the controversy here arises. *See, e.g.,* State Motion, Exh. 1, Declaration of Dianne Nielson (Nov. 12, 2004), ¶¶ 4-5; State Motion, Exh. 2, Patty Henetz, *Goshutes' waste plan hits a snag; Yucca Mountain may reject spent nuclear fuel from proposed Skull Valley site; Skull Valley may be stuck with N-waste*, Salt Lake Trib., Oct. 15, 2004, at A1.

Specifically, as Dr. Nielson recalls, Mr. Lanthrum stated that DOE was required only to accept bare spent nuclear fuel from the nuclear utilities that generated it, would not accept spent fuel in presealed welded canisters, and, further, was not obligated to pick up such fuel from the PFS facility. *See* State Motion, Exh. 1, Declaration of Dianne Nielson (Nov. 12, 2004), ¶ 4.

On November 16, 2004, upon request, we extended the time the Applicant and the Staff had to respond to the State's newly filed contention. In doing so, and in the interest of efficiency, we directed the State first to supplement its motion by addressing: (1) the possible impact on its pending motion of the 10 C.F.R. § 2.734 criteria for reopening an evidentiary record; and (2) whether, if we did grant its motion, the issues raised by Contention Utah UU should be addressed in the first instance by this Board, and in what manner, or in the alternative be addressed by the NRC Staff as a supplement to its National Environmental Policy Act (NEPA) review.<sup>5</sup>

The State filed the supplement to its motion on November 29, 2004,<sup>6</sup> addressing the section 2.734 reopening factors. It declined the opportunity to address the second part of our order, however, regarding it as premature to consider how to resolve the merits of the proposed contention.<sup>7</sup>

In its December 6, 2004 response, the Applicant urged us to reject Contention Utah UU on essentially three grounds: (1) that the State met neither the section 2.734 reopening standard nor the requirements for filing a new contention based on recently arising information; (2) that there was no foundation for the asserted DOE informal statement, it being fully undercut by documents reflecting a different, official DOE viewpoint; and (3) that, even if true, the "no PFS fuel to Yucca Mountain" proposition could not lead to a different outcome in, and thus was immaterial to, this proceeding, in light of the consideration given to post-PFS transportation scenarios in the Final Environmental Impact Statement (FEIS) for the facility. With respect to the second ground, the Applicant supplied several supporting documents of its own, which it claimed removed all foundation from the State's proposition that DOE was not obligated to, and indeed would not, accept spent fuel from the PFS facility.<sup>8</sup>

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<sup>5</sup> *See* our unpublished November 16, 2004 "Order (Addressing Applicant's Request for Extension and Related Matters)" at 2-3.

<sup>6</sup> The State's supplement was inadvertently dated November 16 on its cover page but, as reflected at its conclusion, was actually completed and served on November 29.

<sup>7</sup> Perhaps there was a misunderstanding, for we were seeking only the State's opinion on how the proposed contention should be addressed at this juncture *if it were to be admitted*. In any event, our decision not to admit the contention moots the second, unanswered question.

<sup>8</sup> *See* Applicant's Response to State of Utah's Request for Admission of Late-Filed Contention Utah UU (Dec. 6, 2004) [hereinafter Applicant Response].

The following day, we decided not to move forward to set the oral argument we had earlier thought might be needed. Rather, in the interest of efficiency, we directed the State to respond by December 17, 2004, to: (1) the Applicant's documentary evidence (by providing either other documents or other interpretations of the same documents), and (2) the Applicant's arguments that the Staff's FEIS was adequate in its current form.<sup>9</sup>

In its December 10, 2004 response to the State's filings, the Staff asserted that: (1) Contention Utah UU was impermissibly late; (2) the State did not show that a materially different result would be reached if the contention were admitted, as required by section 2.734; and (3) even if Contention Utah UU were not impermissibly late, it lacked the substantial factual basis necessary for admissible contentions pursuant to NRC regulations.<sup>10</sup>

One week after we received the Staff's response, the State filed its December 17 reply, the final word to us on the subject. In that pleading, the State averred that the Applicant's papers were nonresponsive to the issues posed by Contention Utah UU. Specifically, the State urged that the Applicant had improperly focused on the yet-to-be-designed Yucca Mountain facility and on DOE's obligation to accept all domestic commercial spent nuclear fuel under the Nuclear Waste Policy Act (NWPA), while ignoring the different issues raised by Contention Utah UU of whether the Standard Contract required DOE to accept waste in the form in which it would be stored at the PFS facility and whether DOE would collect the spent fuel from the PFS facility at all.<sup>11</sup> The State further responded to the Staff filing by asserting that a materially different result would indeed be likely should the Board admit Utah UU to this proceeding, for the FEIS cost-benefit analysis had not contemplated the possibility that DOE would not accept spent fuel from the PFS facility.

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<sup>9</sup> See our unpublished December 7, 2004 "Order Regarding 'Contention Utah UU.'" In the same order, we also directed the Staff to address in its pending response to the State's motion whether any DOE documents had previously been introduced in the PFS proceeding, or were otherwise available to the Staff or PFS, to indicate whether spent fuel from PFS would be acceptable at Yucca Mountain. *Id.* at 1 n.1. To avoid any potential delays attributable to document unavailability, we also directed the Staff and the Applicant to supply complete copies of referenced documents to the State. *Id.* at 2. The next day the Applicant advised the State as to where the documents could be retrieved electronically. See Letter from Jay E. Silberg, Counsel for PFS, to Denise Chancellor, Utah Assistant Attorney General (Dec. 8, 2004), ADAMS Accession No. ML043510178.

<sup>10</sup> See NRC Staff's Response to "State of Utah's Request for Admission of Late-Filed Contention Utah UU (Ramifications of DOE's Refusal To Accept Fuel in Welded Canisters From the PFS Site) or in the Alternative Petition for Rulemaking" (Dec. 10, 2004) at 1-2 [hereinafter Staff Response].

<sup>11</sup> See State of Utah's Reply to Responses Filed by the Applicant and the Staff to Utah's Request for Admission of Late-Filed Contention Utah UU (Dec. 17, 2004) at 1-2.



## II. THE GOVERNING LEGAL STANDARDS

We have discussed contention admissibility standards on numerous occasions throughout the course of this proceeding,<sup>12</sup> and therefore will not provide an extensive discussion of those requirements here. In sum, 10 C.F.R. § 2.714(b)(2) requires that each contention include: (1) a brief explanation of the bases for the contention; (2) a concise statement of the alleged facts or expert opinion on which the petitioner relied to prove the contention, along with the source references relied upon to establish those facts or opinions; and (3) sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact, including references to particular portions of the application and the reasons for the dispute, or the identification of a failure of the application to put forth information on a relevant matter required by law and reasons supporting the alleged omission.

Moreover, where the contention at issue is not filed during the period of time allotted by the agency's rules, the petitioner must also show that a balancing of five factors weighs in favor of admitting the contention. *See* 10 C.F.R. § 2.714(a)(1). Specifically, the petitioner must show: (1) good cause for failure to file on time, (2) the unavailability of other means of protecting petitioner's interest, (3) the extent to which petitioner's participation may reasonably be expected to assist in developing a sound record, (4) the extent to which petitioner's interest will be represented by existing parties, and (5) the extent to which petitioner's participation will broaden or delay the proceeding.

Of these, the most important factor is whether good cause exists to excuse the untimely filing. If the petitioner is unable to establish good cause, there must be a compelling showing on the remaining four factors sufficient to override the lack of good cause. Because we have elaborated on this balancing test on other occasions in this proceeding, we will not do so here.<sup>13</sup>

In addition, because the contention arrived at the tail end of this proceeding, with the record on the only remaining issue having previously been closed, we need be cognizant of 10 C.F.R. § 2.734, which sets standards regarding what is required for reopening the record. Included among those standards, in subsections (a)(2)-(3), is that the "motion must address a significant safety or environmental issue" and that it "must demonstrate that a materially different result would be or would have been likely had the newly proffered evidence been considered initially."

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<sup>12</sup> *See, e.g.*, LBP-98-7, 47 NRC 142, 178-82 (1998); LBP-01-39, 54 NRC 497, 505-06 (2001).

<sup>13</sup> *See, e.g.*, LBP-01-39, 54 NRC at 507 (elaborating on the balancing test required by the section 2.714(a)(1) factors).

In the main, that regulation addresses situations where a party moves to reopen an evidentiary record to present further evidence on a particular issue that was *already* the subject of the hearing. Subsection (d) goes on, however, to indicate that even where, as here, a party wishes to reopen the proceeding to address a *new* contention, the party must still fulfill the reopening criteria of subsections (a) through (c), in addition to the late-filing and general contention admissibility criteria found, respectively, in 10 C.F.R. § 2.714(a)(1) and (b)(2). It was based on this interpretation that we asked the parties to address whether the State’s filing met not only the criteria necessary for admission of a new contention, but also the standards required to reopen an evidentiary record.<sup>14</sup>

In this regard, the Applicant reminded us that the agency’s former Appeal Board had quite some time ago spoken to just the situation now presented, and had defined the procedure to be followed “when confronted with a motion to ‘reopen the record’ which . . . seeks a further evidentiary hearing on new issues not previously considered.” See *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-138, 6 AEC 520, 523-24 (1973). Not being inclined to try to improve on the test laid down there for how to evaluate the admissibility of contentions on new subjects that arise after the evidentiary record has been closed, we simply repeat that test verbatim:

[T]o 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, . . . no reopening of the evidentiary hearing will be required if the [documents] 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 . . . issue does not exist, has been resolved, or for some other reason will have no effect upon the outcome of the licensing proceeding.

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[W]hile it is useful from an analytical standpoint to keep separate the factors to be considered on a motion to reopen, it will not always be possible, in passing upon the motion, to give them separate consideration. *The questions of whether the matter sought to be raised is significant and whether it presents a triable issue may often be intertwined, and can be so treated . . .*

*Id.* (emphasis added) (citations omitted).

In effect, then, the *Vermont Yankee* Appeal Board was indicating that, at this stage of a case, the standards governing contention admissibility and those

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<sup>14</sup> See our unpublished November 16, 2004 “Order (Addressing Applicant’s Request for Extension and Related Matters)” at 2-3.

governing summary disposition can, and should, be conflated. That advice seems to have withstood the test of time,<sup>15</sup> and we therefore follow it here.

### III. THE RESULTING RULING

For purposes of ruling on the pending request, we take the State's averments as true, and presume the accuracy of Dr. Nielson's rendition of what she heard the DOE official say. That leaves as the crucial matter the import of what he said.

Taking that approach, we have been presented with arguments against the contention's admission that challenge its materiality (in terms of leading to a different result), its underpinning (in terms of its factual support and basis), and its timeliness (in terms of the applicable regulatory criteria). We will discuss those arguments in that order.

But we begin by noting what emerges from the parties' filings, which in some respects pass by each other rather than meet head on. Quite simply, there are two different perspectives from which to view the statement of the DOE official.

On the one hand, the statement heard and recounted by the State could have been meant just to refer to a long-recognized situation, i.e., that a key document, the Standard Contract between DOE and the nuclear utilities, does not cover PFS-stored fuel because *at the time it was developed* "the issue of accepting large multiple spent fuel element containers" had *simply not been* "contemplated by [DOE] or utilities."<sup>16</sup> In light of that situation, DOE had made it clear in the past that "consistent with the goals concerning minimizing spent nuclear fuel handlings," DOE would eventually "*be willing to initiate the appropriate actions to include such a system as an acceptable waste form under the terms of the standard contract.*"<sup>17</sup>

It could well be, then, that the recent oral pronouncement that PFS-stored fuel is not covered by the Standard Contract may have been intended — as the Applicant sees it — as nothing more than an innocuous repetition of what has long been a fact. Under that view, it would have *no more import than to remind everyone that the amendment* of the Standard Contract to incorporate the PFS-type eventuality — not contemplated when the Standard Contract was drafted — *has yet to be done*.

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<sup>15</sup> If anything, the agency's regulations governing the admission of contentions have been made more stringent in the half a lifetime since *Vermont Yankee* was decided. Accordingly, those rule changes would not be expected to have served to convert the *Vermont Yankee* test into one *more favorable* to the State at this juncture of a proceeding.

<sup>16</sup> See Applicant Response, Exh. 7, Letter from Lake Barrett, Deputy Director, DOE Office of Civilian Radioactive Waste Management, to R.M. Grube, Director, Fuel Management Department, Yankee Atomic Electric Company (Aug. 20, 1996), at 1 (emphasis added).

<sup>17</sup> *Ibid.* (emphasis added).

If that interpretation is all that was meant, the DOE statement would indeed add nothing material to the matters before us. It follows that the pending contention, which relies on the statement for its basis, would warrant no consideration by us, being barred both as an untimely rehash of old information and as contributing nothing that would raise any question about the common understanding (*see* p. 110, above) about the PFS project's relationship to the longer-term issues concerning spent nuclear fuel. (The unfinished business to which it refers may, however, warrant attention elsewhere, as we explain on pages 126-27, below.)

The statement could, however, have been intended — as the State's arguments seemed to be suggesting — to have more dramatic import than simply reciting the existing, yet-to-be-amended, contractual state of affairs. Along those lines, it may have been put forward as a way of announcing a *new DOE policy* that PFS-stored fuel — in its presealed canisters — was now viewed as indeed *substantively* unacceptable, *ever*, in that form at the now-contemplated Yucca Mountain repository. Under that view, being not *now* covered in the Standard Contract, the PFS-stored spent fuel was not only *not now eligible* for disposal at Yucca Mountain, but *would remain so* unless repackaged.

As indicated above, the Applicant would prevail, and the State's new contention would have to be rejected, if the Applicant's interpretation of the DOE statement were correct. If the State's interpretation of the DOE statement were correct, however, we might well reach the opposite result. We discuss all this below.

#### **A. Materiality**

In determining whether the State's new NEPA-driven contention could bring about a material change in the existing FEIS's NEPA-related approval of the project, we start by pointing out that, broadly speaking, there are as a *factual matter* two distinct components to, and recipients of, the environmental impacts of this facility. One impact would be *felt by the neighboring residents*, stemming from the facility's construction and its operation (the latter derived largely from the presence of the spent fuel casks on site for whatever period they remain there).<sup>18</sup> The other, entirely distinct, impact is that *felt across the country* by those

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<sup>18</sup>We assume it was this factor the Applicant had in mind when, in opposing admission of the State's new contention, it pointed out that the Commission had previously expressed approval of our indication that the environmental impacts of the project were slight. *See* Applicant Response at 15 (citing CLI-04-22, 60 NRC 125, 145 (2004)). But we had expressed that view in the course of ruling on the State's Contention Utah SS, where what was at stake was the difference between a 20- and a 40-year license. It was in that context that we were speaking of the environmental impact at the *facility itself*, as envisioned in Skull Valley on private lands (i.e., on the Reservation of the Skull

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(including residents of Utah) upon whom the transportation of the fuel — to and/or from the facility — may have a potential impact.<sup>19</sup>

In terms of *legal principles*, we look first to how the federal courts have interpreted NEPA. Again speaking broadly, NEPA requires, under the “cumulative impacts” rubric, the taking into account of future reasonably foreseeable results of current federal (licensing) actions, and imposes a rule against incrementalism, that is, against analyzing a succession of currently contemplated federal (licensing) actions in series, as though they were separate, unrelated activities.<sup>20</sup>

For these purposes, then, the scope of the NEPA analysis requires that the project, *including its definite follow-ons*, be fairly defined. See 40 C.F.R. §§ 1501.7, 1508.25. Here, one could argue that, for NEPA purposes, the only subject of the pending license application is the PFS facility as proposed for Skull Valley. Under that view, where the fuel goes afterward could be viewed as

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Valley Band of Goshute Indians, who had willingly leased their lands for that purpose). To say that the environmental impacts at that facility are small *in the context of comparing a 20-year versus a 40-year operational period* is not in any way to imply that *rehandling, repackaging and reshipping the spent fuel to be stored there is a matter of little concern under NEPA in light of the common understanding and current advertising pointing otherwise*. See pp. 122-23, below.

<sup>19</sup>This makes the facility unlike a nuclear reactor, with respect to which the environmental risk of radiological effects associated with decades of operation dwarfs any similar risks associated with transportation. See 10 C.F.R. § 51.52(c) n.4. The construction and operation of the PFS facility, on the one hand, and the transportation of spent fuel to and away from it, on the other, present an entirely different balance of relative environmental impacts than does the relationship of spent fuel transportation to reactor operation. The FEIS recognizes as much, in that the Staff determined that transportation impacts for the PFS facility required a more detailed analysis than that applied to reactors. See Final Environmental Impact Statement for the Construction and Operation of an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County, Utah (Dec. 31, 2001) at 5-40 [hereinafter PFS FEIS].

<sup>20</sup>See the general NEPA regulations developed by the Council on Environmental Quality in 40 C.F.R. § 1508.7; 10 C.F.R. § 51.14(b) (NRC-specific NEPA regulation); *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n.20 (1976) (less imminent contemplated actions need not be analyzed); see also *Utahns for Better Transportation v. U.S. Department of Transportation*, 305 F.3d 1152, 1173-74 (10th Cir. 2002) (future additional lanes in highway project need not be considered if only speculative); *Airport Neighbors Alliance, Inc. v. United States*, 90 F.3d 426 (10th Cir. 1996); *Natural Resources Defense Council v. Callaway*, 524 F.2d 79, 87-88 (2d Cir. 1975); *Texas Committee on Natural Resources v. Van Winkle*, 197 F. Supp. 2d 586 (N.D. Tex. 2002).

To be sure, many of these precedents involve matters where the court held that the future action that the plaintiffs wanted included in the NEPA analysis was *in fact* too speculative or uncertain to require its inclusion. But the limiting factual determinations those courts made about the scope of a particular project do not undercut the *underlying principle* that where a future action *is found* to follow ineluctably (rather than to be speculative or uncertain in nature), its inexorable impacts must be included in the *current* NEPA analysis of the government action.

too speculative to consider at this juncture.<sup>21</sup> In turn, that would mean that only transportation to and from the site need be considered (and, as we will see, that has indeed been done here).

We might readily agree with the legitimacy of this “PFS-only” definition of the project but for its being called into question by the Applicant’s indication in its own Environmental Report that “[t]he storage system technology is compatible with the long-term plans of the DOE interim storage facility and permanent repository”<sup>22</sup> and by its current advertising for the project (*see* note 1, above), which similarly ties into the common understanding about the fuel’s eventual DOE destination. And, again, this view of the bigger picture of the project is apparently one shared by the Commission, as mentioned on pages 110-11, above. Under this view of the project, a more integrated NEPA analysis might well be demanded if the State’s assertion of a new DOE position against acceptance of PFS-stored fuel at Yucca Mountain carried the day.

Of course, it might eventually turn out that Yucca Mountain will simply not be built (notwithstanding that, for purposes of this and previous NRC licensing proceedings, the Commission’s “waste confidence” rule has required that analysis be conducted on the assumption it would be).<sup>23</sup> The FEIS for this project notes precisely that possibility, but because of the NWPA presents an analysis of the consequences of shipment to a permanent repository at Yucca Mountain.<sup>24</sup>

In any event, the Applicant has dealt with the “no Yucca Mountain” eventuality, in terms of its contractual insistence that the utilities generating the spent fuel both retain title to it, and take it back at the end of the PFS license if Yucca Mountain or another permanent repository is not in existence.<sup>25</sup> And on that score, the FEIS analyzes the transportation impacts in a manner that takes care of that eventuality.

That FEIS transportation analysis goes this way. The FEIS considers the environmental effects of transporting the fuel across the country from the originating utility to the PFS site.<sup>26</sup> Then, in order to consider the environmental effects of

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<sup>21</sup> There is, indeed, language in the FEIS that seems to embody a Staff view explicitly recognizing some degree of uncertainty about Yucca Mountain for this purpose. *See* PFS FEIS at 5-35, 5-46, 5-54; *but see* “waste confidence” rule, discussed in text, this page.

<sup>22</sup> Private Fuel Storage Facility Environmental Report, Ch. 1, Rev. 11, at 1.2-7.

<sup>23</sup> *See* 10 C.F.R. § 51.23.

<sup>24</sup> *See* FEIS at p. 5-54; *see also id.* at 5-46.

<sup>25</sup> *See, e.g.,* LBP-02-8, 55 NRC 171, 177 (2002).

<sup>26</sup> We note that in doing so the FEIS abandons any notion that the transportation effects are fully delineated by the elements of Table S-4 and are thus *de minimis*. As the Staff now appears to recognize in the PFS FEIS, considering transportation of spent fuel from a reactor to a storage or disposal site as *de minimis in terms of the construction and operation, for several decades, of a nuclear power plant,*

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transporting the fuel *from* PFS to a permanent repository, for convenience the FEIS reasons that those effects — involving a “going out” transportation run with spent fuel whose radioactivity will then be approximately one-half of what it was when shipped *to* the PFS site,<sup>27</sup> and assuming the outgoing trip is of equal length to the incoming run (even though it may in fact be shorter)<sup>28</sup> — will certainly not be *more* than the cross-country effects of getting it to the PFS site in the first place. In effect, then, the FEIS for the PFS project has already factored in the *equivalent* of two cross-country trips, in the course of evaluating one such trip to the PFS site and one trip, of indeterminate distance, away from it.

Viewed that way, the FEIS has already evaluated (1) the environmental impacts of transporting the spent fuel from the originating reactor to the proposed PFS site, and (2) upon the failure to build a permanent repository, the impacts of transporting it back. This argument has some merit, if all that is involved are the supposedly minimal transportation impacts mentioned in the FEIS.

But the State’s challenge is not to the *necessity* for a *second* cross-country shipment if Yucca Mountain is *not* built. It is, rather, to the addition — if Yucca Mountain *is* built but rejects the PFS-stored fuel as is — of (1) not only an *unnecessary* second such shipment but a *third* one as well, and of (2) a *major operational step*, before that third shipment, of *unsealing the welded canister* to “repackage” the spent fuel.

It is, of course, possible that all these concerns are *de minimis*, and thus to agree with the Applicant that full consideration of the contention would not lead to any materially different environmental consequences, in that whatever happens to the fuel after its arrival at PFS is not material to the outcome here. In that connection, it could also be argued that concerns over the ultimate later fate of the fuel are not environmentally consequential but simply involve a business matter to be resolved between PFS and its customers, who are free to reject the opportunity the PFS facility would provide if the terms are not satisfactory to them.

As it turned out, no evidentiary record was ever developed, in an adversary context, to test the Applicant’s and Staff’s assumptions about the minimal impact of cross-country transportation. We would thus be at some disadvantage in any effort to evaluate the merits of these arguments.<sup>29</sup>

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does not establish that transportation of much of the Nation’s spent fuel to a storage or disposal site is *de minimis in terms of the comparatively minor construction and operation impact of a storage facility*. See PFS FEIS at 5-40.

<sup>27</sup> See PFS FEIS at 5-55.

<sup>28</sup> See *id.* at 5-38.

<sup>29</sup> At an earlier stage, the State’s attempts to raise a series of transportation-related contentions were rebuffed by our predecessor Board for having been filed a few days later than the 30-day deadline the Board had established for new contentions arising from newly available information. LBP-00-28, 52 NRC 226, 236 (2000). The Commission upheld that ruling. CLI-04-4, 59 NRC 31, 46 (2004).

But assuming that any transportation-related environmental impacts could be *justified as part of a coherent scheme* of waste fuel disposal — from originating reactor, cross-country to temporary storage, then to nearby permanent repository, all in the same canister — those impacts *may make far less sense* if they are known to be *part of* what the State calls a *dysfunctional system* — from originating reactor, cross-country to temporary storage, back cross-country to reactor (or elsewhere) to be “recontainerized,” and back again cross-country to permanent repository not far from the initial temporary storage site. If NEPA requires anything, it is that alternatives be evaluated, and that latter one would seem to have little to commend it.

This is the nature of the argument the State seeks to raise here. If its interpretation of the DOE statement embodied in its new contention is correct, that contention challenges the common (and Commission’s) understanding about a role of the facility proposed to be licensed.

In that instance, more of an inquiry might well be in order, regardless of what has been said about transportation impacts and independent of the earlier dismissal, on procedural not substantive grounds, of the State’s transportation-related contentions. Our thought process in this regard takes a cue from Judge Wisdom’s insightful approach in *McCain v. Davis*, where he famously remarked, in the context of racial discrimination, that “What all Louisianans know, this Court knows.” 217 F. Supp. 661, 666 (E.D. La. 1963) (three-judge court).

Along that line, we hazard the observation that “What all those dealing with spent nuclear fuel know, this Board knows.” That would include that the fewer the times spent fuel canisters are transferred from one cask to another, the better; and even more to the good are *the fewer the times bare fuel bundles are switched from one canister to another*, and *the fewer the times canisters are shipped cross-country*.<sup>30</sup> If this were not the case, then presumably DOE would not have spoken officially (*see* p. 117, above) of the need to act “consistent[ly] with the goals concerning *minimizing spent nuclear fuel handlings*.”

Congress would certainly seem to have already taken a position in implicit agreement with the view that shipping spent-fuel-laden canisters fewer, rather than more, times across the country would make sense (and thus would better comport with NEPA). For the NWPA directs that, before DOE begins shipping spent fuel from reactor sites to Yucca Mountain, that agency fund and train the “first responders” in local communities along the way, preparing them to deal

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<sup>30</sup> Our observation is consistent not only with the DOE documents before us here, but with the reported statement, which we cite only because it is a truism, of two Nuclear Energy Institute officers to the effect that the industry believes “you don’t handle spent fuel more often than you need to.” *See* Christopher Smith, *Nuclear Industry Doesn’t Back Temporary Utah Storage*, Salt Lake Trib., Dec. 9, 2004, at A15.



with possible emergencies.<sup>31</sup> In that fashion, Congress has seemingly recognized that the risk of those shipments is not zero; rather, that risk — whatever its calculated or actual level — must have been viewed as sufficient to justify the expenditure of considerable training time and financial resources to ameliorate it.<sup>32</sup>

Thus, it is perfectly understandable that State of Utah officials would be alarmed, and would embody that alarm in a new contention, upon hearing from a DOE official a statement that they thought undercut the overall scheme that they understood to accompany the PFS facility — i.e., the plan that, assuming that both it and the Yucca Mountain facility are built, the spent fuel temporarily stored at PFS would eventually move *directly* to the permanent repository. Not to do so would seem not to make sense, at least from a NEPA standpoint if not from others, particularly given the proximity of Yucca Mountain to Skull Valley.

In that regard, we are unaware that the Applicant ever suggested during this entire proceeding that, if Yucca Mountain *were* built, the spent fuel would not go there, but instead would go back to its point of origin to be removed, not just from the shipping cask, but from the multipurpose canister, and readied for another cross-country shipment. Nor can we recall that it ever suggested that there might someday need to be added at Skull Valley a facility to extract spent fuel from canisters and repackage it for shipment to Yucca Mountain.

Our view, then, is that before we could credit the Applicant's and Staff's arguments that the State's new contention could be dismissed because no materially different environmental result *could possibly* obtain in this proceeding, we would need to invest, at the least, far more analytical effort than we are now prepared to give it. We would also have to reconcile the views of individual Board members, whose differing preliminary analyses might lead them in different directions.

As it turns out, we need not pass final judgment on the *theory* behind the immateriality argument, for the Applicant's next argument carries the day — the *facts* as they appear at this juncture do not provide a basis to which that theory

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<sup>31</sup> 42 U.S.C. § 10175(c). That law does not apply to the privately arranged shipments that would go to the PFS site. But we take judicial notice that the consortium's Chief Executive Officer informed the Nuclear Waste Technical Review Board that the Applicant anticipates providing its own training to first responders along the travel routes. See United States Nuclear Waste Technical Review Board, Transportation Planning Panel Meeting (Oct. 14, 2004), Tr. at 384-85. Presumably, then, the Applicant too shares the view that, in the real world, potential transportation impacts deserve real attention.

<sup>32</sup> The congressional action serves a different purpose than did the Commission's determination that, for purposes of NEPA consideration of the construction and decades-long operation of a *nuclear power plant*, the environmental impacts of shipping spent fuel are comparatively small and can be summarized in the minimalist "Table S-4." As the Staff's FEIS recognizes, the impacts of those shipments are entirely different in the context of a facility whose central purpose is the temporary away-from-reactor storage of spent nuclear fuel. See PFS FEIS at 5-40.

can be tied. But for purposes of the NEPA analysis of this project, the foregoing discussion can be considered to have amended the FEIS *pro tanto*.<sup>33</sup>

## **B. Underpinning**

In contrast to the foregoing, the Applicant's argument that the State's new contention lacks a sufficient underpinning is one that prevails. *In light of the positions taken, and the countering documents submitted, by the Applicant*, nothing in the State's newly proffered contention survives that would support our requiring an inquiry into whether DOE now intends to force on the Nation either of the potential outcomes referred to in the third-from-last paragraph of Section A, above. *It is on that understanding — alone — that we dismiss the State's contention without any further Licensing Board proceedings.* If the facts change, it will then be for others to examine the legitimacy of any new approach to the project.

The reasoning behind the conclusion just indicated is as follows. Although the State did indeed appear to have new information that, *standing alone*, might well have justified admission of a new contention, the admission of Contention Utah UU to this proceeding came down to a simple question: whether or not that factual support for the proffered contention could, *in the face of contradictory information*, be relied upon for even that preliminary purpose.

As an initial matter, we note that a licensing board cannot admit to a proceeding a contention that is formulated as a bare assertion without factual underpinning.<sup>34</sup> A close examination of the documents submitted by the State, the Applicant, and the Staff with regard to Contention Utah UU makes clear that there is, at this time, inadequate factual support for the proposition that DOE will not accept spent nuclear fuel from PFS because the spent nuclear fuel is stored in presealed containers. Although the State offered the statement of a witness who heard a DOE official make a remark to that effect, that remark itself has no factual underpinning except its reference to the current form of the Standard Contract being executed between originating nuclear utilities and DOE for acceptance of spent nuclear fuel by DOE at Yucca Mountain (a form contract that does not indicate what different contract would eventuate if the PFS facility were to be built and to be utilized by nuclear utilities).

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<sup>33</sup> See LBP-03-30, 58 NRC 454, 474 (2003) (citing *Allied-General Nuclear Services* (Barnwell Nuclear Fuel Plant Separations Facility), ALAB-296, 2 NRC 671, 680 (1975); *Louisiana Power and Light Co.* (Waterford Steam Electric Station, Unit 3), LBP-82-100, 16 NRC 1550, 1571 n.20 (1982); 10 C.F.R. §§ 51.102(c), 51.104(a)(3)).

<sup>34</sup> See 10 C.F.R. § 2.714(b)(2)(ii) and, e.g., an earlier decision herein, LBP-98-7, 47 NRC 142, 178, 180-81 (1998).

In response, the Applicant submitted documents embodying the affirmations, over time, of cognizant DOE officials to the effect that DOE will accept waste in a variety of packages, including dual-purpose canisters such as that contemplated for PFS,<sup>35</sup> and that the existing Standard Contract will be adapted to accommodate that packaging.<sup>36</sup> Therefore, we find that the statement allegedly made by the DOE official, on which the State bases its new contention, cannot reliably be interpreted or viewed as reflecting new DOE policy.

Stated otherwise, the State has put forward an opinion about the Yucca Mountain framework advanced by a DOE Office Director.<sup>37</sup> But the Applicant has supplied what appear to be official DOE documents — whose legitimacy the State has not challenged<sup>38</sup> — that undercut the oral opinion that is the foundation for the State’s new contention. *These countering documents take on added significance because the management authority of the DOE official upon whose statement the State would rely does not appear to be in the specific area of which he spoke.*

Thus, we are not faced with the oral opinion of a program administrator about the nature of his program, and inconsistent documents from elsewhere in the agency, but the converse — documents from the affected program that take clear precedence over the opinion of an official from elsewhere. Under the *Vermont Yankee* standard, then, this potential controversy can be resolved *at this reopening stage* in favor of what the documents appear to establish.

### C. Timeliness

In light of the conclusion just reached, we need devote little attention to the question of timeliness. We need only note that, if — as is not the case — there was a clear foundation for the State’s contention as to the nature of the Yucca Mountain conditions on receipt of spent fuel, the contention might well have met the following conditions: (1) good cause for its so-called “late-filing,” in that it was submitted within 30 days of the emergence of the new announcement on which it was premised;<sup>39</sup> and (2) potential for changing the outcome of

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<sup>35</sup> See Applicant Response at 13.

<sup>36</sup> See *id.*

<sup>37</sup> If this matter had made it to trial, the DOE official’s in-person testimony, rather than its recounting by another, would have been needed. For purposes of today’s ruling, we are assuming he made the statement precisely as attested to by Dr. Nielson. What is in issue are the shortcomings inherent in the statement as recounted.

<sup>38</sup> The State is challenging their interpretation and import.

<sup>39</sup> That was the time period established, and relied upon, by our predecessor Board, and it still governs this proceeding. See note 29, above.

the proceeding, justifying admission even though the record had been closed.<sup>40</sup> Because the contention is being rejected on another ground, we need not address these and other timeliness-related factors.

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As indicated above, the materials submitted by the Applicant make it appear that no one in a position of authority in DOE is *advocating the result* that the State thinks would be so untoward. On the other hand, no one has yet *taken the initiative* to do what those official documents say should be done, i.e., the reshaping of the Standard Contract to accommodate the PFS-type eventuality.

Perhaps, as one of the documents indicated, that cannot be done until the Yucca Mountain plans are farther along.<sup>41</sup> Perhaps, as the same DOE official told the Nuclear Waste Technical Review Board, the ongoing litigation between the nuclear utilities and DOE has precluded the conduct of the negotiations that would have to take place for the contract amendment to be accomplished.<sup>42</sup>

It may not be of concern that this has not yet been accomplished. AEC/NRC doctrine, going back to earliest times, provides an analogy — applicants do not have to have all their other permits in hand before they can obtain an agency license.<sup>43</sup> Applicants are, instead, allowed to pursue in parallel the many permits and licenses they will eventually need to move forward with their proposal. But given the understanding, created by the Applicant's filings with the agency and advertising to its customers (*see* note 1, above), about the movement of fuel seamlessly from storage in Skull Valley to ultimate repose, it would seem advisable at least to attempt, before any spent fuel were to move to the proposed PFS facility, *to put into place an arrangement whereby DOE has agreed to take that fuel*, as then packaged, to Yucca Mountain, if it is eventually approved and built.

Putting such an arrangement in place does not seem like a role for us. As we have held, the papers before us establish that no evidentiary hearing is needed, or

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<sup>40</sup> We do admit to some conceptual difficulty in applying the same outcome-changing test to, on the one hand, (1) new evidence sought to be admitted on an already-tried issue, for which the test is readily understandable and easily applied by the Board that has heard the earlier evidence; and on the other hand, to (2) a new contention, for almost by definition most admissible contentions can change the outcome (for if they cannot lead to any remedy, they are on that ground *inadmissible* under 10 C.F.R. § 2.714(d)(2)(ii)).

<sup>41</sup> *See* Applicant Response at 13-14.

<sup>42</sup> *See* United States Nuclear Waste Technical Review Board, Transportation Planning Panel Meeting (Oct. 13, 2004), Tr. at 84-85.

<sup>43</sup> *See, e.g., Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 58 (1974); *Consumers Power Co.* (Palisades Nuclear Plant), LBP-79-20, 10 NRC 108, 124 (1979).

would be useful, on this point. *Rather, it seems to be a matter the Commission would want to address in some other manner.*

This could take place in several fashions. Under the special regulation applicable to this facility, if the adjudicatory process ends in the Applicant's favor, the Staff is not empowered — as it is in other instances — to issue the requested license. Rather, the Commission has to consider whether to authorize the Staff to do so. 10 C.F.R. § 2.764(c).

That regulation is silent as to what the Commission is supposed to consider or weigh at that point. The matter embodied in the State's latest contention might be suitable for the Commission to consider if that juncture is reached, perhaps making the receipt of spent fuel dependent upon the utilities and DOE having negotiated the anticipated changes in the Standard Contract.

The Commission may have other avenues for accomplishing the same result — e.g., a rulemaking proceeding<sup>44</sup> looking toward a directive to any nuclear utilities contemplating offsite temporary storage; or a management overture to DOE as part of the regular series of quarterly meetings referred to in the materials before us;<sup>45</sup> or some other approach. The point is this — the State's latest contention is not suitable for resolution in the adjudicatory process, but it is too important to be ignored, unless avoiding the “creation of a dysfunctional spent fuel management system” is viewed as not of NRC concern but is something to be left entirely to (1) the discretion of DOE or (2) such arrangements as the consortium and its customers are able, and choose, to make.

Given the seemingly universal recognition that *extra or unnecessary* handling and shipping of spent fuel should be avoided if possible, we think NEPA requires more, and that our role in NEPA's implementation requires us to say so. We rest with having called the matter to the Commission's attention.

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Thus, we hold that Contention Utah UU is *inadmissible* in that it provides inadequate factual support, *at this juncture and in light of the opposing filings*, for the proposition that DOE will not accept sealed canisters of spent nuclear fuel from the proposed PFS facility. Accordingly, the State's request that Contention Utah UU be accepted for consideration in this proceeding is DENIED, and that Contention is DISMISSED. Our discussion herein of that Contention's NEPA aspects will be deemed to have AMENDED the PFS FEIS *pro tanto*.

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<sup>44</sup> The State's moving papers sought rulemaking as an alternative (*see* p. 112, above).

<sup>45</sup> *See* Staff Response at 11 n.23.

Under the agency's Rules of Practice, this ruling is interlocutory and thus not appealable upon issuance. Any appeal is to be taken after we render our final ruling in the proceeding.<sup>46</sup>

It is so ORDERED.

THE ATOMIC SAFETY AND  
LICENSING BOARD

Michael C. Farrar  
ADMINISTRATIVE JUDGE

Peter S. Lam  
ADMINISTRATIVE JUDGE

Paul B. Abramson  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
February 24, 2005

Copies of this Order were sent this date by Internet e-mail transmission to counsel for Applicant PFS, Intervenor State of Utah, and the NRC Staff.

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<sup>46</sup>In that regard, only one matter remains before us for determination: a decision on the merits on the accidental aircraft crash "consequences" matter, which was the subject of a 16-day evidentiary hearing and on which we received the final brief on December 22, 2004. Issuance of that decision is imminent.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

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

**In the Matter of**

**Docket No. 72-22-ISFSI**

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

**March 16, 2005**

**ORDER**

On January 5, 2005, we issued CLI-05-1, requiring Private Fuel Storage (PFS) to submit proposed redactions to three Commission orders (CLI-04-10, CLI-04-27, and CLI-05-1). On February 4th, PFS submitted fifty-eight proposed redactions, and on February 8th, the State of Utah filed objections to four of those redactions. For the reasons given in the Appendix (not published) to today's decision, we do not agree with Utah that we should make publicly available the information found in those four redactions. The information at issue relates to the details of PFS's cost-passthrough arrangements, and we believe its release would compromise PFS's legitimate competitive concerns. We make the Appendix available to the parties but not to the public because it discusses proprietary information.

Accordingly, we:

- (1) *Reject* Utah's objections to four of PFS's fifty-eight proposed redactions to CLI-04-10, CLI-04-27, and CLI-05-1;

- (2) *Approve* all of PFS's proposed redactions to those three Memoranda and Orders;
- (3) *Instruct* SECY to release to the public the redacted versions of those three Memoranda and Orders, all of which are attached hereto. SECY shall ensure that these redacted versions are available to the public both in the appropriate Public Reading Rooms and on our Agencywide Documents Access and Management System (ADAMS); and
- (4) Further *instruct* SECY to release this Order to the public but to withhold from the public the Appendix to this Order.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 16th day of March 2005.



UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Nils J. Diaz**, Chairman  
**Edward McGaffigan, Jr.**  
**Jeffrey S. Merrifield**

**In the Matter of**

**Docket No. 72-22-ISFSI**

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

**March 24, 2004**

**MEMORANDUM AND ORDER**  
**(Original Version Contains Proprietary Information)**

Private Fuel Storage, L.L.C. (PFS), and the State of Utah have filed cross petitions for review of Licensing Board decisions concerning financial qualifications and decommissioning funding. PFS seeks review of one order — the Licensing Board’s January 5, 2004 Memorandum and Order Granting in Part and Denying in Part Motion for Reconsideration and/or Clarification of Financial Qualifications Decisions (unpublished) (“Reconsideration Ruling”). Utah seeks review of several related orders — the Board’s May 27, 2003 Partial Initial Decision (Contention Utah E/Confederated Tribes F, Financial Assurance) (“PID-E”), its May 27, 2003 Partial Initial Decision (Utah S, Decommissioning) (“PID-S”), its May 27, 2003 Memorandum and Order (Rulings on Summary Disposition Motion and Other Filings Relating to Remand From CLI-00-13) (“MSA Ruling”), and its January 5, 2004 Reconsideration Ruling.<sup>1</sup>

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\*This is the redacted public version of the Commission’s sealed Memorandum and Order dated March 24, 2004, and does not include the proprietary information contained in the sealed version.

<sup>1</sup>This series of Board decisions remains unpublished because of as yet unresolved questions of proprietary information and confidentiality.

The Commission has full discretion whether to undertake appellate review of its licensing boards' merits decisions. NRC rules say that the Commission may grant review of initial Board decisions (or partial initial decisions) based on "any consideration" it "deems to be in the public interest."<sup>2</sup> Review is particularly appropriate where the Board's ruling may have made a clear error as to a material fact, where the ruling turns on a legal conclusion that is without precedent or conflicts with existing precedent, or where the ruling raises an important policy issue that the Commission itself should consider.<sup>3</sup>

For the reasons set forth below, we grant review of PFS's claims concerning whether PFS must have service contracts in place to cover O&M costs for 1000 casks prior to beginning operations and whether those contracts must be in a specific dollar amount. We deny review of the issues raised in Utah's petition.

## I. BACKGROUND

The petitions for review concern Utah Contention E/Confederated Tribes F, raising the question whether PFS has provided reasonable assurance of being able to cover its costs of operating and maintaining its proposed facility, and Utah Contention S, raising the question whether PFS will have adequate decommissioning funding.<sup>4</sup>

In a March 2000 decision in response to a PFS motion for summary disposition of Utah E, the Board found that only two issues should proceed to hearing: the accuracy of PFS's operation and maintenance cost estimate, and the adequacy of its onsite liability insurance coverage.<sup>5</sup> The Board found that two license conditions proposed by the NRC Staff provided reasonable financial assurance. The first required that PFS have enough funds committed to construct the entire first phase of the project prior to beginning any construction, and the second required that it have service contracts in place to cover operational, maintenance, and decommissioning costs prior to accepting spent fuel for storage. The Board referred to the Commission its ruling that these conditions provided reasonable financial assurance. In CLI-00-13, the Commission affirmed the Board's ruling, thus approving the concept of service agreements as a means to show financial assurance. But the Commission required PFS, on remand, to produce a model

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<sup>2</sup> See 10 C.F.R. § 2.786(b)(4); see generally *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-4, 59 NRC 31, 35-36 (2004). Throughout this decision we refer to the provisions of our former Part 2, which applies to this proceeding. Effective February 14, 2004, we have changed Part 2 in significant respects. See Final Rule: "Changes to Adjudicatory Process," 60 Fed. Reg. 2182 (Jan. 14, 2004).

<sup>3</sup> See 10 C.F.R. § 2.786(b)(4).

<sup>4</sup> See 10 C.F.R. § 72.22(e).

<sup>5</sup> See LBP-00-6, 51 NRC 101 (2000).

service agreement for the Board's review so that Utah could raise (and litigate) any deficiencies in the agreement's terms.<sup>6</sup>

On remand, the Board issued a decision finding the model service agreement adequate despite a series of Utah challenges.<sup>7</sup> The Board also found that PFS had met its burden to show reasonable assurance of adequate financing.<sup>8</sup> Finally, the Board required PFS, prior to operation, to have in place sufficient service contracts to fund the estimated operating costs of a full-size, 4000-cask facility.<sup>9</sup> On reconsideration, the Board relaxed the initial funded capacity to 1000 casks.<sup>10</sup>

Much earlier, in June 2000 — before the Commission had issued CLI-00-13 — the Board had held hearings on estimated costs of operation, maintenance, decommissioning, and liability insurance. At the time of the June 2000 hearings, PFS had in place a financing plan quite different from the one that emerged later in connection with litigation over the model service agreement.

The original PFS plan called for the customer to pay a “base storage fee,” divided into three lump-sum payments, and annual storage fees.<sup>11</sup> The lump sums would cover construction, canister, and other upfront costs. Under PFS's current plan, the only sum certain the customer is obligated to pay is a nonrefundable x x x x x x x x “commitment fee” upon signing.<sup>12</sup> In addition to the commitment fee, to cover construction costs, PFS's new scheme calls for its customers to x x x x x x x x x x in the amount of x x x x x x x x per kilogram of uranium in “reserved capacity,” the amount of fuel the customer plans to store.<sup>13</sup> x x x x x x x x x x.

The new plan calls for customers to pay estimated annual operation and maintenance costs upfront on a quarterly basis.<sup>14</sup> At the end of each year, the customer is either billed or credited to reflect the difference between the estimated and actual costs. Whereas the previous plan called for canister and cask costs to come out of a second lump-sum payment to PFS, now the plan calls for the customers to own the casks and canisters and pay the vendors directly. Upon shipping a cask, the customer pays its allocated portion of decommissioning costs.<sup>15</sup>

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<sup>6</sup> CLI-00-13, 52 NRC at 35.

<sup>7</sup> See MSA Ruling, slip op. at 80-81.

<sup>8</sup> See PID-E, slip op. at 101-02.

<sup>9</sup> See *id.* at 87, 95.

<sup>10</sup> See Reconsideration Ruling, slip op. at 16-17.

<sup>11</sup> For a comparison of previous funding scheme versus PFS's new plan, see MSA Decision, slip op. at 5-13.

<sup>12</sup> *Id.*

<sup>13</sup> See *id.* at 7-8.

<sup>14</sup> *Id.* at 8.

<sup>15</sup> *Id.* at 9.

In November 2000, Utah voiced various objections to the new financing plan and moved to reopen the record in the June evidentiary hearings. The Board ultimately refused to reopen the record, finding that the changes in PFS's financing scheme and Utah's objections to it would not "materially alter the result" of the hearing, as required for reopening a hearing record.<sup>16</sup> The Board agreed with PFS's argument that the subject of the June hearings was cost estimates only.<sup>17</sup> The Board noted that Utah had not filed any late-filed contention in light of PFS's changed financial plan, but rested on its previous contention.<sup>18</sup> None of Utah's concerns about the new financing plan fell within the scope of the hearings or would alter the result, the Board concluded.<sup>19</sup>

Before us today is Utah's challenge to the Board's decision, its challenge to the Board's approval of the model service agreement, and its challenge to the Board's overall financial assurance holding. Also before us are PFS's claims that the Board imposed unnecessarily restrictive financial conditions on operating the proposed PFS facility.

## II. DISCUSSION

### A. PFS Petition for Review

PFS requests review of the Board's requirements that (1) a specific dollar amount of projected O&M costs must be covered by customer service agreements in order to satisfy the license conditions the Commission approved in CLI-00-13, and (2) PFS have customer service agreements in place to cover the full O&M costs of at least a 10,000-MTU (1000-cask) facility prior to beginning operations.

#### 1. "Specific Dollar Amount" Requirement

PFS argues that it need not have agreements in a specific dollar amount because it intends to use "passthrough" contracts wherein the customer agrees to pay for all associated O&M costs, similar to the contracts approved by the Commission a few years ago in a license transfer case, *Northern States Power Co.* (Monticello Nuclear Generating Plant; Prairie Island Nuclear Generating Plant, Units 1 and 2; Prairie Island Independent Spent Fuel Storage Installation).<sup>20</sup> On reconsideration, the Board rejected this argument because the Commission in

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<sup>16</sup> 10 C.F.R. § 2.734(a).

<sup>17</sup> MSA Ruling, slip op. at 78-80.

<sup>18</sup> *See id.* at 57 n.7.

<sup>19</sup> *Id.* at 80.

<sup>20</sup> CLI-00-14, 52 NRC 37 (2000) (order issued the same day as CLI-00-13).

CLI-00-13 had explicitly provided that PFS should have contracts in place to cover costs in an “amount to be determined at a hearing.”<sup>21</sup> The Board noted that the Commission’s directive in CLI-00-13 requiring contracts for specific amounts predated the MSA cost-passthrough scheme, but said: “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.”<sup>22</sup>

The NRC Staff opposes review of the “specific dollar amount” issue. The Staff agrees with the Board that the Commission’s order in CLI-00-13 called for contracts in a specific dollar amount, as determined by the Board after a hearing. It argues that PFS should have asked the Commission to revise its directive, rather than asking the Board to change its ruling on a motion for reconsideration. The Staff also notes various differences between PFS’s situation and that of Nuclear Management, the power plant operators whose passthrough contracts the Commission found adequate in the *Monticello* case.<sup>23</sup> For example, the Staff says, in *Monticello*, Nuclear Management’s sole customer was an electric utility with rate-backed revenues. Finally, the Staff argued that PFS “never sought to eliminate consideration of its cost estimates and prices as a basis for demonstrating financial assurances.”<sup>24</sup> Utah opposes the PFS position on similar grounds.

But the differences or similarities between the PFS plan and the situation in the *Monticello* case may prove irrelevant. The Board found that the model service agreement provides reasonable financial assurance, even though the executed contracts would not provide for a specific sum but would be passthrough contracts. If the Board’s decision stands as it is, the service agreements may have to be redrafted.<sup>25</sup>

The PFS petition for review and the responses do not adequately clarify the seeming contradiction between approving the passthrough contracts — which apparently lack specific dollar amounts — and requiring contracts for a specific

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<sup>21</sup> See Reconsideration Ruling, slip op. at 12; see also CLI-00-13, 52 NRC at 36.

<sup>22</sup> MSA Ruling, slip op. at 13 n.9.

<sup>23</sup> See “NRC Staff’s Response to ‘Applicant’s Petition for Review of Memorandum and Order Granting and Denying in Part Motion for Reconsideration and/or Clarification of Financial Qualification Decisions,’” at 7-8.

<sup>24</sup> Two years elapsed between the hearings on cost estimates and the Board’s decisions on financial assurance, during which time PFS developed its new financing plan. It is not clear, however, that using “passthrough” contracts would eliminate the need to estimate the costs of the facility. NRC regulations require that the licensee provide reasonable assurance that it will be able to cover “estimated costs.” 10 C.F.R. § 72.22(e). This suggests that a cost estimate would be necessary regardless of the type of billing method in the service contracts.

<sup>25</sup> It is possible that the Board meant that x x x x x x x x, as provided in the MSAs, must equal 1/120 of the Board’s estimated costs (20 years times 4 quarters), but that is not clear from the decisions.

sum as a condition of operation. Hence, we have decided to grant PFS's petition for review in the expectation that full briefing will shed light on the matter.

## 2. *O&M for Initial Capacity Facility of 1000 Units*

PFS also contests the Board's finding that it must have service agreements in place to cover O&M costs and decommissioning costs sufficient for a 1000-unit facility prior to beginning operations.<sup>26</sup> PFS's application is for a facility holding up to 4000 units. PFS points out, though, that it has always planned to build the facility in stages.

The Board initially held that PFS must have service contracts in place to cover the full amount of estimated operating, maintenance, and decommissioning costs for a 4000-unit facility.<sup>27</sup> PFS's reconsideration motion argued that it always planned to build in stages, and that in CLI-00-13, the Commission did not require O&M funding for a 4000-unit facility prior to commencing operations. On reconsideration, the Board decided to require full O&M funding for a 1000-unit facility.<sup>28</sup> The Board chose this figure because the record was "replete" with references to a 1000-unit initial-capacity facility.<sup>29</sup>

PFS objects to the 1000-unit figure, arguing that it never said it would start operations with as many as 1000 units. It wants to begin operations as soon as it has enough service contracts to cover fixed costs plus per unit costs, whatever that initial number of units will be.

The license conditions as originally proposed by the NRC Staff in the SER, and as substantially approved by the Commission in CLI-00-13, required that prior to construction, PFS have full funding for *construction* of "a facility with the initial capacity as specified by PFS to NRC."<sup>30</sup> In CLI-00-13, the Commission also ordered that license conditions should require that operations would not begin until service contracts were in place to cover operational, maintenance, and decommissioning costs, but did not refer to the "initial capacity." But the Board seemingly interpreted CLI-00-13 to require specifying a total dollar amount for which PFS must have commitments prior to commencing *operations*, which would in turn require the Board to pick a certain number of casks for startup.

There is a substantial practical difference between a license condition that requires full funding for *constructing* a facility of a certain capacity, and one that requires full funding sufficient to cover operations and decommissioning for that

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<sup>26</sup> See Reconsideration Ruling, slip op. at 16-17.

<sup>27</sup> PID-E, slip op. at 101-02.

<sup>28</sup> Reconsideration Ruling, slip op. at 18.

<sup>29</sup> *Id.* at 16-17.

<sup>30</sup> CLI-00-13, 52 NRC at 27 (emphasis added). The "initial capacity" was omitted from the SER as proprietary information.

same number of casks. As long as the Board's estimates of fixed and per-unit costs is accurate, it seems reasonable that PFS could satisfy NRC's financial assurance regulations at the operational stage by having service contracts in place that cover both the fixed costs and the per-unit costs for each cask actually accepted.

The Board ruling requiring O&M funding for a specific facility size therefore arguably reflects a mistake of law or fact, perhaps deriving from ambiguities in our own opinion in CLI-00-13. We intend to examine this issue more closely upon receipt of full briefs. We therefore accept review of this issue.

## **B. Utah's Petition for Review**

Before addressing the specific charges of error in Utah's petition for review, we offer a few general observations. In CLI-00-13, the Commission approved the use of license conditions, including customer service agreements, as a means of showing PFS's financial assurance. At the time, PFS proposed to use service contracts that would ensure that it has a dependable revenue stream to cover its costs of running the facility throughout the term of the license. CLI-00-13 approved the NRC Staff's proposal to use license conditions to establish enforceable financial assurance commitments. The Commission also directed that PFS produce a model service contract for review by the Board.

The point of having the model service agreement supplied and reviewed by the Board was to give Utah and the NRC Staff an opportunity to uncover legal weaknesses or loopholes in the model agreement that would permit a customer to walk away from its waste or leave PFS with costs that it could not recover from its clients. But to a great extent, Utah complains not of flaws in the contracts themselves, but argues that either (1) the terms of the contracts are so lopsided that no customer would enter them or (2) the customer would simply ignore its contractual obligations.

The first complaint is simply addressed: if a particular nuclear power plant operator does not agree to the terms of the model service agreement, that operator will not store spent fuel at the PFS facility. If PFS can find no customers willing to enter into the contracts, then the PFS facility will never commence operations, even if PFS obtains an NRC license. The second concern is completely speculative. All of PFS's potential customers are NRC licensees — many are rate-regulated utilities — and all have themselves previously undergone evaluations of their financial capability to operate their facilities safely, including waste storage. We reject Utah's suggestion that PFS must establish the creditworthiness of each and every potential customer prior to operations. It is enough that PFS's customers will have the ability and contractual obligation to pay. PFS cannot be expected to prove that all of its customers invariably will fulfill their financial commitments. There is always a risk in business that some customer may ignore its obligations and force its creditor into court. "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.’’<sup>31</sup>

Keeping these general observations in mind, we review each of the specific issues raised in Utah’s petition.

### ***1. PFS License Conditions Go Far Beyond Claiborne***<sup>32</sup>

Utah argues that the Commission should look again at PFS’s financing plan because it goes far beyond *Claiborne* and the Commission’s previous assumptions about the PFS plan. Utah argues PFS has substantially revised its financial plan from what it was when the Commission initially approved the license condition concept. Specifically, PFS will have no capital contributions from its members, will seek no commercial loans, and will rely entirely on revenues from its customers for operating costs.

This argument appears to be an attempt to relitigate the Commission’s prior approval of the service contract device as a means of establishing financial qualifications.

Utah’s reliance on distinguishing PFS’s plan from the license applicant’s in *Claiborne* is inapposite. Financial assurance must be viewed on a case-by-case basis. A license applicant’s financial plan reflects estimated construction and operating costs, revenue streams, etc., which will vary dramatically depending on the type of facility. Here, a storage facility is entirely different from the uranium enrichment facility at issue in *Claiborne*. Consequently, the financial mechanisms necessary to show financial assurance will undoubtedly differ.

While Utah attempts to point out various disparities between the PFS plan and LES’s in *Claiborne*, it ignores the fact that many of the “weaknesses” of which it complains in its petition were present in the LES case. For example, Utah objects that PFS will have no commercial loans; but in *Claiborne*, at the time the Commission found LES financially qualified, no lender had committed to finance the project either.<sup>33</sup> As the Commission found, “the LES financial plan [was] not based on preclicensing funding commitments from either the LES partners or lending institutions.” And just as PFS relies on what Utah styles “hypothetical customers,” LES had no executed enrichment contracts in hand at the licensing phase.<sup>34</sup> Both LES and PFS relied primarily on their own commitments not to go forward with the project without the contracts in hand.

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<sup>31</sup> *North Atlantic Energy Service Corp.* (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 222 (1999).

<sup>32</sup> *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294 (1997).

<sup>33</sup> *Id.* at 304.

<sup>34</sup> *Id.*



In some respects, PFS's plan offers greater assurances than those present in *Claiborne*. For example, PFS plans to use service contracts covering the entire life of the license. In contrast, LES's "long-term service contracts" were of only 5 years' duration.<sup>35</sup> LES faced greater challenges meeting its operating expenses given the highly competitive world market for enriched uranium. PFS, on the other hand, has no competitors now or in the foreseeable future for private, away-from-reactor dry storage. Finally, LES never produced a model contract for scrutiny by the Board, Staff, and Intervenor, as PFS has done.

While there no doubt are substantial differences between the LES plan and PFS's, the fundamental question is whether PFS's plan departs from governing regulations, the Commission's controlling order on financial qualifications (CLI-00-13), and sound financial sense. Utah cites no regulation the PFS plan violates, and no specific conflict with CLI-00-13. Further, Utah's argument that financial soundness requires PFS to have equity payments from members or commercial loans is fact-driven. The Board saw the record otherwise.<sup>36</sup> Utah has not shown that the Board erred in finding the plan adequate despite the full reliance on customer service contracts for funding.

## 2. *Nonspecificity of License Conditions*

Utah claims that the license conditions should be made more specific to incorporate promises (1) to use the approved model service agreement, (2) to obtain insurance in the amount determined by the Board, and (3) to annually review decommissioning costs to ensure the adequacy of funding.

We held in an earlier decision in this proceeding that not all licensee commitments need to be reduced to license conditions in order to bind PFS.<sup>37</sup> Utah's complaints help to illustrate why this is true. The Commission's order in CLI-00-13 suffices to ensure that the service agreements actually entered by PFS depart in no material respect from the model service agreement. As we explained in CLI-00-13, minor variations may be acceptable, but we reasonably can leave to the NRC Staff the task of monitoring the agreements and making sure that PFS lives up to its commitments.<sup>38</sup>

Utah wants incorporated as a license condition the Board's order that PFS obtain insurance in the appropriate amount as the Board determined.<sup>39</sup> This

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<sup>35</sup> *Id.*

<sup>36</sup> *See, e.g.,* MSA Ruling, slip op. at 22-23 (rejecting argument that PFS will have "no assets").

<sup>37</sup> *See* CLI-01-9, 53 NRC 232, 236 (2001).

<sup>38</sup> *See* CLI-00-13, 52 NRC at 34-35 (Staff is allowed "room to exercise professional judgment").

<sup>39</sup> *See* PID-E, slip op. at 100-01. Because PFS committed to pay x x x x per annum and obtain at least \$70 million in insurance coverage, the Board ordered PFS to obtain insurance coverage of either \$70 million or the amount that a x x x x annual premium will obtain, whichever is greater.

concern also does not warrant Commission review. The Board's order fully binds PFS. Because we see no suggestion of error in the Board's determination of the amount of insurance, we will not review it.

Finally, Utah wants a license condition requiring PFS to review its decommissioning costs annually. The Board found a specific license condition to be unnecessary, because the Commission's regulations already require a Part 72 licensee to conduct "periodic" reviews.<sup>40</sup> In addition, the Board found a license condition unnecessary because PFS had publicly committed to conducting annual reviews, and because its customers, by contract, would cover any decommissioning funding shortfall.<sup>41</sup> In light of these considerations, the Board's ruling is appropriate.

### ***3. The Model Service Agreement Does Not Satisfy Bases 1-10 of Utah E***

Utah contends that the Board erred in finding that the model service agreement resolved the issues raised in its financial assurance contention (Utah E). Utah claims that the Board violated due process in refusing to reopen the record of the June 2000 hearing to address Utah's concerns with the model service agreement, and in denying Utah discovery.

The Board found that the standard for reopening the record was that the new evidence must "materially alter the outcome of the hearing." The Board found that Utah's concerns would not. The Board stressed that the subject of the June 2000 hearing was PFS cost estimates, not PFS's method of recovering those costs from its customers. The Board further ruled that the ambiguities Utah found in the model service agreements did not demonstrate that there were "relevant uncertainties significantly greater than those that usually cloud business outlooks" in the PFS business plan.<sup>42</sup>

Utah contends that because the model service agreement is so "lopsided and open-ended that no reasonable business would enter into them," PFS's business plan is completely unrealistic. Utah points out that no customer has yet entered into one of PFS's contracts. It also argues that the model service agreement is "illusory" and the NRC's financial assurance finding should be based on executed contracts.

Our decision in CLI-00-13 already addressed Utah's concerns that no customer will agree to the terms of the model service agreement. PFS cannot commence operations until funding is committed — that is, until long-term agreements are entered. Hence, if no customer enters into the service agreements, then PFS

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<sup>40</sup> 10 C.F.R. § 72.30(b).

<sup>41</sup> See PID-S, slip op. at 45-47.

<sup>42</sup> PID-E, slip op. at 63-64, quoting *Seabrook*, CLI-99-6, 49 NRC at 222.

may not start up operations. The Board’s ruling in PID-E also recognized this.<sup>43</sup> While it is evidently true that no customer has yet entered into a contract with the as yet unlicensed facility, this fact alone does not expose any weakness in the contract that would allow a customer to walk away from its spent fuel or payment obligations. Our decision in CLI-00-13 contemplated that financial assurance could be demonstrated by a *model* contract coupled with PFS’s commitment to use that model. We see no reason to revisit that holding now.

The Board’s decision not to reopen the record (or to restart discovery) correctly applied the standard for reopening a hearing record. It was also consistent with the Commission’s direction in CLI-00-13 and NRC’s financial assurance regulations. There is no need for further Commission review here.

#### **4. Inadequacy of Model Service Agreement to Meet PFS’s Costs**

Utah objects that PFS’s financing scheme does not require it to have sufficient cash on hand to cover costs as they arise, creating the potential for PFS to risk safety to save costs. Utah faults PFS’s proposal x x x x x x x x x x. Utah also contends that financing its operations through service agreements is unreliable because it depends on the creditworthiness of PFS’s customers.

The flaw in the scheme, as Utah sees it, is the likelihood that some of the customers that enter the service contracts will not pay their bills on time. Fundamentally, then, the “inadequacy” of which Utah complains is not with the model service agreement as written, but with the possibility that PFS customers will evade their contractual obligations.

The Board considered Utah’s concerns, and found that PFS customers were reasonably creditworthy:

[T]o the degree the State has concerns about continued customer viability in the context of facility operations and the concomitant lack of a large PFS cash reserve to address this purported (albeit somewhat overstated) problem, . . . general, undifferentiated concerns about the future viability of PFS customers are not adequate to establish a lack of compliance with Part 72 financial assurance provisions, particularly when such concerns are expressed (1) relative to entities already subject to Part 50 financial qualifications requirements, . . . and (2) in the face of MSA requirements for regular, quarterly payments of all PFS estimated costs . . . .<sup>44</sup>

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<sup>43</sup> See, e.g., MSA Decision, slip op. at 76 (“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”).

<sup>44</sup> *Id.* at 63-64 (internal citations omitted).

In addition, the service agreements must have provisions requiring customers to periodically provide updated credit information and additional financial assurances.<sup>45</sup> In light of the Commission's prior approval of service agreements as evidence that PFS will have an adequate revenue stream, the Board did not err in accepting these particular service contracts as assurance of revenue.

**5. *Board's Ruling Allows PFS To Avoid Showing Reasonable Financial Assurances Throughout the Life of the Facility***

Utah complains that in allowing the passthrough contracts to substitute for estimating some costs, the Board ignored section 72.22(e)'s requirement that the applicant must show "reasonable assurance of obtaining the necessary[] funds . . . to cover . . . [e]stimated operating costs over the planned life of the ISFSI." This, Utah says, clearly requires that costs be estimated prior to finding financial assurance.

Utah argues that PFS has not demonstrated funding through the "planned life of the facility," because the Board found that the service agreements actually entered would only need to cover the O&M for the 20-year license term, not the facility's actual planned life of 40 years. Utah claims that the Board should not have halved the amount of costs that PFS needs to operate the facility through the anticipated 40 years of operation. But the Commission held in CLI-00-13 that service contracts should be in place to cover "the life of the license."<sup>46</sup> In addition, while PFS readily admits that it may seek to renew its license after 20 years, there is no certainty about that. PFS's continued existence will depend on a continued need for private away-from-reactor storage. If such a need develops, financial assurance for the renewal term will be an issue for the license renewal proceeding. It was not error for the Board to choose 20 years as the applicable term.

Utah also claims that the use of passthrough contracts directly violates the NRC rule, 10 C.F.R. § 72.22(e), requiring reasonable assurance that it will "obtain" funds to cover estimated O&M costs. Utah claims that passing costs on to customers is not the same as "obtaining funds." But the Commission has already held, in this case and in *Claiborne* before it, that having binding service contracts in place can provide reasonable assurance that the licensee will obtain the necessary funds. Again, this is not the time to relitigate issues settled earlier in this proceeding.

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<sup>45</sup> A license condition will require the service agreements to include these provisions. CLI-00-13, 52 NRC at 36.

<sup>46</sup> 52 NRC at 36.

**6. Board's Rulings Require Staff To Make Subjective, Nonministerial Post-Licensing Judgments**

Utah complains that likely customer resistance to the “lopsided” service agreements will result in significant alterations, which in turn will require the NRC Staff to make sophisticated legal judgments in determining whether PFS has complied with its license conditions. We reject this argument. First, it relies on the claim that PFS will violate its license condition by willfully redrafting the contracts to its own financial peril, which we find speculative. In addition, Utah’s argument presumes that the NRC Staff cannot be relied on to recognize a significant alteration in the contract that PFS has bound itself to follow. We already have discussed, in CLI-00-13, the scope of the NRC Staff’s post-licensing authority to review PFS’s compliance with its license conditions.<sup>47</sup>

**V. CONCLUSION**

For the foregoing reasons, the Commission grants review of PFS’s claims of error and denies review of Utah’s claims of error. The parties are directed to file briefs, not to exceed twenty-five pages, on the two issues on which review is accepted. PFS should file its opening brief within 21 days of this Order; the NRC Staff and Utah should file their answering briefs within 21 days after receipt of PFS’s brief. PFS may file a reply brief, not to exceed five pages, within 7 days after receipt of the Staff and PFS briefs. The NRC Staff may also file a short brief (not to exceed ten pages) in support of PFS in the facility size issue. That brief must be filed at the same time as PFS’s opening brief.

All briefs should be served electronically. Any brief exceeding ten pages shall contain a table of cases and authorities and a table of contents. Any interested *amici curiae* are authorized to file briefs as set out above, at the time of the party they support.

Finally, because today’s decision discusses PFS’s financial plan it contains proprietary information. The parties, may, if they choose, submit to the Commission a designation of appropriate redactions prior to our order’s publication. We will withhold publishing for at least 14 days. If we receive any proprietary designation, we will redact the order appropriately prior to publication.

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<sup>47</sup> See 52 NRC at 34-35.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 24th day of March 2004.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Nils J. Diaz**, Chairman  
**Edward McGaffigan, Jr.**  
**Jeffrey S. Merrifield**

**In the Matter of**

**Docket No. 72-22-ISFSI**

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

**October 7, 2004**

**MEMORANDUM AND ORDER**  
**(Original Version Contains Proprietary Information)**

This Order addresses two issues concerning the financial assurance given by the Applicant, Private Fuel Storage, L.L.C. (PFS), in this licensing proceeding. In CLI-04-10,<sup>1</sup> the Commission granted review of two findings in the Licensing Board's January 5, 2004, Memorandum and Order Granting in Part and Denying in Part Motion for Reconsideration and/or Clarification of Financial Qualifications Decisions<sup>2</sup> ("Reconsideration Ruling").

The first issue is whether, prior to beginning operations, PFS should be required to have service contracts in place with prices set in a specific amount as determined at the evidentiary hearing. The second is whether the service contracts must add up to an amount sufficient to fund operations for a full-to-capacity, 1000-unit facility.

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\*This is the redacted public version of the Commission's sealed Memorandum and Order dated October 7, 2004, and does not include the proprietary information contained in the sealed version.

<sup>1</sup> 61 NRC 131 (2005). CLI-04-10 also rejected various challenges to the Board's financial assurance rulings. In today's decision we address PFS-proposed issues on which we granted review.

<sup>2</sup> Unpublished pending resolution of proprietary redactions issues.

We find that changes in PFS’s financial plan make it appropriate to modify a financial license condition that the Commission imposed in 2000.<sup>3</sup> That condition directed PFS “not to 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.”<sup>4</sup> We now find that if PFS’s license is subject to the condition that it use “cost-passthrough” service contracts, in substantially the form submitted to and approved by the Board, with respect to all fuel accepted for storage, then we are reasonably assured that PFS will have the financial means to safely operate and decommission the proposed facility. This modified condition allows PFS to use its Board-approved service contracts without redrafting them to state specific prices for storage services. The condition also allows PFS to commence operations without regard to the number of casks initially stored. Finally, the condition makes the obligation to use the Board-approved service contract a continuing one, so that all fuel will be covered by similar contracts throughout the PFS license.

Therefore, in light of changed circumstances, we modify our previous ruling as described above, and we vacate that portion of the Board’s order requiring PFS to have service contracts with preset prices sufficient to cover operating and decommissioning costs for 1000 units.<sup>5</sup> Instead, we require that PFS enter service contracts covering all costs relating to the customers’ spent fuel, including common expenses, throughout the storage term for all spent fuel accepted at its facility. If PFS’s customers will not enter such contracts, PFS cannot accept their spent fuel.

## I. BACKGROUND

The procedural history of the issues decided today is long and somewhat complex. We will summarize it briefly here. Utah first raised its concerns about PFS’s financial assurance in its Contention E. In a March 2000 decision responding to PFS’s summary disposition motion, the Board found that only two aspects of Utah E should proceed to hearing: the accuracy of PFS’s operation and maintenance cost estimate, and the adequacy of its onsite liability insurance coverage.<sup>6</sup> In so ruling, the Board found that two license conditions proposed by the NRC Staff provided reasonable assurance that PFS could meet the costs of operating its proposed facility. The first (“LC-1”) would require PFS to have enough funds committed to construct the entire first phase of the project prior to

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<sup>3</sup> CLI-00-13, 52 NRC 23 (2000).

<sup>4</sup> *Id.* at 36.

<sup>5</sup> x x x x x x x x x.

<sup>6</sup> See LBP-00-6, 51 NRC 101 (2000).



beginning any construction. The second (“LC-2”) would require PFS to have service contracts in place to cover operational, maintenance, and decommissioning costs prior to accepting spent fuel for storage.

Utah objected that using license conditions in this manner effectively deferred PFS’s financial assurance determination until after the license is issued, because PFS would not have the service agreements in hand until just prior to starting operations. Utah argued that financial assurance for construction and operations should not be subject to post-license verification, as opposed to prelicense proof. Noting Utah’s objections, the Board referred to the Commission its ruling that these conditions provided reasonable financial assurance, and proceeded to hold hearings on the remaining aspects of Utah Contention E in June of 2000.

In CLI-00-13,<sup>7</sup> issued after the Board’s evidentiary hearings, the Commission substantially affirmed the Board’s ruling, thus approving license conditions as a means for PFS to show financial assurance. But the Commission required PFS, on remand, to produce a model service agreement (“MSA”) for the Board’s review so that Utah could raise and litigate any deficiencies in the agreement’s terms.<sup>8</sup> The Commission directed that conditions be included in PFS’s license so that it was “not to 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.”<sup>9</sup>

After the issuance of CLI-00-13, and prior to presenting the MSA to the Board, PFS revised its financing plan. The original PFS plan called for the customer to pay a basic storage fee, plus annual fees (with prices escalated according to designated inflation indices). Under the new financing plan, customers are to pay storage costs under so-called “cost-passthrough” contracts. These contracts would not establish set prices, but would require customers to pay PFS’s costs. Utah moved to reopen the record of the June 2000 evidentiary hearings in light of PFS’s new financial plan.

In May 2003, the Licensing Board rendered three related decisions,<sup>10</sup> concluding that PFS had demonstrated reasonable assurance that it is financially capable of building, operating, and decommissioning the proposed facility, provided that it comply with the various license conditions. In its Memorandum and Order (Rulings on Summary Disposition Motion and Other Filings Relating to Remand from CLI-00-13) (“MSA Decision”), the Board concluded that the MSA would meet the financial assurance license conditions.<sup>11</sup> It also denied Utah’s Motion to Reopen the Record, concluding that none of the matters raised by the state

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<sup>7</sup> 52 NRC 23.

<sup>8</sup> CLI-00-13, 52 NRC at 35.

<sup>9</sup> *Id.* at 36 (emphasis added).

<sup>10</sup> Unpublished pending resolution of issues relating to proprietary information redactions.

<sup>11</sup> MSA Decision, slip op. at 57-73, 80.

would materially alter the result of the hearings.<sup>12</sup> In its Partial Initial Decision (Contention Utah E/Confederated Tribes F, Financial Assurance) (“PID-E”), the Board ruled that prior to beginning operations, PFS should have long-term service contracts in place with prices totaling the operating cost estimate for a 20-year license, as that amount was determined at the June 2000 hearings.<sup>13</sup> The third Partial Initial Decision (“PID-S”) found reasonable assurance of decommissioning funding.

The source of the current dispute is the Commission’s rephrasing of the license condition LC-2 to require service contracts “with prices adequate to fund operations . . . in the amount to be determined at hearing.”<sup>14</sup> The Board interpreted this phrase to mean that the contracts must state prices that add up to the estimated costs of running the ISFSI for the entire term of the license. Because the applicable regulation requires the Licensee to identify how it will pay “[e]stimated operating costs over the planned life of the ISFSI,”<sup>15</sup> the Board at hearing determined the cost of operating the facility assuming it were filled to maximum capacity allowable under the license. That is, the hearing estimated the maximum possible operating costs. PFS interpreted the Commission’s phrasing in CLI-00-13 as requiring only that the contracts would ensure that all actual costs related to operating the facility are covered, not to require contracts with prices adding up to the maximum possible operating costs.

At PFS’s urging, the Board reconsidered its PID-E. The Board found that PFS need not have service contracts sufficient to cover the total operating expenses for a 20-year facility, but need only cover the costs of a full-to-capacity, 1000-unit facility.<sup>16</sup> The Board reasoned that PFS intended to build the facility in stages, with the first stage having a maximum capacity of only 1000 casks. The Board rejected PFS’s argument that the cost-passthrough contracts eliminate the need to state specific prices in order to satisfy the conditions imposed by the Commission in CLI-00-13.<sup>17</sup>

PFS now asks the Commission to modify these conditions in two respects. First, it says that the cost-passthrough contracts are sufficient to show financial assurance without the necessity of naming a particular price in them. Including a set price in the service contracts is unnecessary and inconsistent with its overall financing scheme, PFS says. In addition, PFS argues that it does not need contracts to cover operating expenses for 1000 units to demonstrate financial assurance. Because the contracts require each customer to pay its share of the facility’s

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<sup>12</sup> *Id.* at 78-80.

<sup>13</sup> PID-E, slip op. at 95.

<sup>14</sup> CLI-00-13, 52 NRC 36.

<sup>15</sup> 10 C.F.R. § 72.22(e)(2).

<sup>16</sup> Reconsideration Ruling, slip op. at 16-18.

<sup>17</sup> *Id.* at 12.

fixed operating costs as well as per-unit costs, PFS says that it will recover all its necessary expenses regardless of how many casks are stored at any given time. Therefore, PFS argues there is no need to have, at the start of operations, contracts with prices totaling the operating expenses that would be incurred if the facility were filled to initial capacity (1000 units).

Utah opposes both of PFS's requests, arguing that they are inconsistent with our prior rulings and would undermine PFS's financial assurance demonstration.

The NRC Staff agrees with PFS that the Board's requirement for funding a 1000-unit facility is unnecessary. But the Staff opposes PFS's argument seeking elimination of set prices in the service contracts. The Staff takes the position that LC-2 should be revised to allow PFS to start operations as long as it has service contracts with prices equal to fixed costs plus per-unit costs for whatever the initial number of casks stored at the facility will be.

## II. DISCUSSION

### A. Financial Assurance Standards in Licensing Proceedings

The Atomic Energy Act authorizes the NRC to impose appropriate financial qualifications standards on licensees.<sup>18</sup> NRC requires a licensee to show reasonable assurance that it is able to handle the financial burdens of operating the facility for which a license is sought. For an ISFSI, the applicant must demonstrate that it

either possesses the necessary funds, or that [it] 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;
- (2) Estimated operating costs over the planned life of the ISFSI; and
- (3) Estimated decommissioning costs . . . .<sup>19</sup>

If the licensee cannot handle the financial burden of construction, operating, and decommissioning costs, public safety could be compromised. The foundation of our financial assurance requirement is, therefore, to protect the public from radiological hazards that could arise if the licensee is not able to meet expenses.<sup>20</sup> It is not the NRC's duty or desire to micromanage the finances of its licensees.

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<sup>18</sup> Atomic Energy Act § 182(a), 42 U.S.C. § 2232(a). See *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-78-1, 7 NRC 1, 8-9 (1978).

<sup>19</sup> 10 C.F.R. § 72.22(e).

<sup>20</sup> See *Gulf States Utilities Co.* (River Bend Station, Unit 1), LBP-95-10, 41 NRC 460, 473 (1995).

Using projections of future revenue is a typical method for license applicants to demonstrate that they can meet costs. In Part 50 reactor licensing cases, which have generally stricter financial requirements than that required for an ISFSI,<sup>21</sup> we require operating license applicants (other than utilities) to submit estimates for the first 5 years of costs, along with the source of funds to pay them.<sup>22</sup> In the case concerning the financial qualifications for the proposed Claiborne uranium enrichment facility under Part 70, the applicant hoped to use the license itself to attract investors.<sup>23</sup> There, we approved the license subject to conditions preventing the start of operations until the licensee had long-term contracts from potential customers. Thus, in cases where the applicant does not have cash in hand, we have allowed the use of license conditions to ensure that the licensee does not start operations without assurance of future revenues.

## **B. Considerations Raised by PFS's Financial Scheme**

### ***1. Post-License Verification***

Near the heart of the financial assurance inquiry is whether the Staff will be able to verify that PFS has complied with the license conditions that are the foundation of its financial assurances. The reason the Commission in CLI-00-13 required PFS to produce its MSA to the Board was to simplify post-license verification. In this appeal PFS itself has raised the verification issue, arguing that if it uses its passthrough MSAs, it would be difficult for the Staff to verify whether PFS had met the proposed license conditions as stated by the Board, which includes a "set price" requirement.<sup>24</sup>

Paragraph 4.79 of the Board's PID-E, prior to reconsideration, would have made verification a matter of adding up the prices specified in the existing service contracts to see if they total the estimated operating and maintenance costs:

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 \$ . . . 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

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<sup>21</sup> See CLI-00-13, 52 NRC at 30-31.

<sup>22</sup> 10 C.F.R. § 50.33(f)(2).

<sup>23</sup> See *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 308 (1997).

<sup>24</sup> Applicant's Brief on Review of Licensing Board Memorandum and Order Granting and Denying in Part Motion for Reconsideration and Clarification of Financial Qualification Decisions (April 14, 2004) ("PFS Brief") at 2.

to fund operations, maintenance, and decommissioning in the amount of \$. . . (to be escalated from 1997 dollars to present-day value), plus \$. . . for Tooele County host payments.<sup>25</sup>

On reconsideration, the Board found that it was bound by the Commission decision in CLI-00-13 to require PFS to have service contracts “with prices . . . in the amount to be determined at [the] hearing” and that it had no authority to waive this requirement in light of PFS’s new financing scheme. But recognizing that requiring PFS to have contracts in advance to cover all costs of a full, 4000-unit facility was unfeasible, the Board softened the requirement by providing that PFS should only have to cover operating expenses of a x x x x x-unit (x x x x x-MTU) initial capacity facility, x x x x x x x x:

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 for an initial x x x-MTU capacity facility in the amount of \$. . . This figure reflects \$. . . for cask, canister, and rail costs (\$. . . per unit x x x x casks), plus \$. . . for fixed and other O&M costs over a 20-year license term, plus \$. . . 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 MTU, the above amount may be adjusted according to the actual number of casks to be used.<sup>26</sup>

With this modification, the NRC Staff would still be able to verify that PFS has assurance of adequate revenues to cover operating costs, simply by adding up the contract prices.

The NRC Staff argues on appeal that, because the Board recognized that it was possible to separate fixed costs from per-unit costs, LC-2 could be modified, consistent with CLI-00-13, to allow PFS to start as long as its service contracts will cover fixed costs plus per-unit costs. Post-license verification could be based on this formula. But the Staff’s solution does not resolve the problem that the contracts, which the Board found adequate, would have to be rewritten to include the figures that the Board came up with in the evidentiary hearing.

PFS argues that its contracts meet the Board’s requirements because LC-2 as stated by the Board in its Reconsideration Decision merely required that PFS have contracts with “prices sufficient to cover” operations and maintenance costs. PFS’s contracts will by definition meet those costs because the MSA defines its prices as equaling PFS’s actual costs, PFS says. But as attractive as this argument

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<sup>25</sup> PID-E, slip op. at 95 (footnote omitted).

<sup>26</sup> Reconsideration Ruling, slip op. at 18 (footnote omitted).

is, it does not change the fact CLI-00-13 said that prices should be “in the amount to be determined at a hearing.”<sup>27</sup>

We cannot fault the Board for sticking to the precise language of CLI-00-13, but we find that circumstances arising after that decision call for revising it. When CLI-00-13 was issued, PFS planned to use a fixed-price contract, making a license condition based on a fixed price sensible. The Commission decision did not anticipate PFS’s change in approach. Considering that new approach now, we find it apparent that PFS designed its MSA to satisfy both the applicable NRC regulations and the intent, if not the language, of CLI-00-13’s license conditions. Further, the Board was satisfied with the contracts. Given the change in the underlying facts, we find it appropriate to modify our previous directive concerning license conditions to specifically allow PFS to use its passthrough contract.

This solution also addresses the second problem PFS raises in its brief on review. PFS plans to build, in its first phase of construction, a facility potentially accommodating up to 1000 units. But it will not have 1000 casks onsite at the start of operations. It will take years to fill this phase to capacity. In fact, this phase might never reach full capacity — in which case PFS would never incur the related operating expenses associated with that many casks. It is not practicable to demand from PFS’s first few customers that they execute contracts “with prices adequate to fund operations, maintenance, and decommissioning for an initial 10,000 MTU capacity facility,” thereby footing the bill for future PFS customers (who may or may not ever come on board).

But when we eliminate the total figure up to which the contract prices must add, we also eliminate the need to pick a number of casks that the contracts must cover. Because the MSA requires each customer to pay its *pro rata* share of fixed operating costs, PFS is assured of recovering its expenses even if the facility is not filled to capacity.

If we understand Utah’s objection, it is that using contracts without demanding they cover the entire cost of a 1000-unit facility would potentially allow PFS to start operations with service contracts covering only the initial casks, but then accept additional casks without adequate service contracts in place. Utah proposes that if PFS is allowed to start operations with fewer than 1000 units, then its licensed capacity should be capped at the amount of that initial inventory (the amount subject to Staff post-license verification).

Utah is right that if the finding of reasonable financial assurance rests on PFS’s service contracts, then PFS cannot be reasonably assured of meeting “estimated operating costs for the planned life of the ISFSI” unless the license condition requiring PFS to use those contracts extends to all fuel it accepts at the facility.

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<sup>27</sup> 52 NRC at 36.

But instead of requiring PFS to have service contracts for all 1000 casks prior to the start of operations, we can reach the same result by modifying the license condition to require PFS to use its approved MSA for all fuel it accepts. This resolves the post-license verification issue as well as Utah's concern that PFS would accept more fuel after verification without adequate contracts. The NRC Staff's task in post-license verification is also simplified, in that the Staff no longer needs to "add up" the prices in the contracts to make sure they equal a particular amount. The Staff need only determine whether an approved "cost-passthrough" service agreement is in place.<sup>28</sup>

## **2. *Whether PFS Waived the Opportunity To Request Revision to CLI-00-13***

Utah claims that PFS has waived its opportunity to challenge the Board's ruling requiring it to have contracts in a specific sum and to ask the Commission to revise its directive in CLI-00-13. Utah points out that PFS asked for the first time in a motion for reconsideration, filed before the Board, that set prices be removed from the anticipated license conditions. According to Utah, this request came too late because, prior to its ruling in PID-E, the Board had explicitly invited the parties to discuss the impacts of CLI-00-13 on their already-filed proposed findings from the June 2000 hearings.<sup>29</sup> In addition, Utah points out, PFS did not ask the Commission to reconsider CLI-00-13 pursuant to 10 C.F.R. § 2.786(e), which provides that a party has 10 days after a Commission decision to do so.

Utah argues in effect that PFS should have realized within 10 days that a single phrase in CLI-00-13 would preclude it from using a passthrough-type contract. In Utah's view, PFS therefore should have either asked the Commission immediately to reconsider that phrase or abandoned the idea of using a passthrough contract.

The Commission reconsiders a decision where it has made a mistake of law or fact. "[R]econsideration petitions must establish an error in a Commission decision, based upon an elaboration or refinement of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification."<sup>30</sup>

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<sup>28</sup> If in the future PFS changes its financial plan, and eliminates "cost-passthrough" contracts, it will have to seek a license amendment. In this regard, it is not the Commission's intent, in ruling on the acceptability of any given license condition, to forestall the Licensing Board's ability to determine the acceptability of an alternative method of meeting NRC financial assurance requirements that might be proposed by this or any other applicant. Our acceptance today of the Applicant's proposed contractual format for providing financial assurance simply means that we find the proposal, subject to certain conditions we describe in this Order, as one, but not the only, acceptable way to meet financial assurance requirements for this proposed facility.

<sup>29</sup> See Board Order (August 4, 2000) (unpublished).

<sup>30</sup> *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-02-1, 55 NRC 1, 2 (2002).

Our rationale for modifying the license condition now stems not from a *mistake* of law or fact in the earlier decision but because the facts have *changed*. PFS now has a cost-passthrough plan that was not before the Commission in CLI-00-13. Putting aside the fact that it would not necessarily be immediately apparent to PFS that the statements in CLI-00-13 concerning license conditions would preclude a passthrough contract, this was not the type of situation where the Commission “reconsiders” its decision. We will not penalize PFS’s failure to file a motion for reconsideration by refusing to allow it to use the Board-approved cost-passthrough contracts.

Utah also argues that PFS should have moved for the Board to reopen the evidentiary record. But that would have been unnecessary, because the only new evidence relevant to this proceeding was the MSA itself, which the Commission required be submitted for the Board’s, Staff’s, and Utah’s examination. We do not see that reopening the hearing record would be “[o]ne avenue for PFS to seek elimination of LC-2,” as Utah has put it.<sup>31</sup> Whether the reference to “price” in CLI-00-13 is a requirement that shapes the MSA, or whether the form of the MSA can eliminate the requirement of “price,” is a legal question, not a fact issue.

Utah also invokes the “law of the case” doctrine to argue that PFS cannot “relitigate” settled rulings. We find this doctrine inapplicable for two reasons. First, issues related to cost-passthrough contracts were not decided in our earlier ruling. Rather, the issue before us in CLI-00-13 was whether a license condition requiring PFS to enter contracts would provide reasonable financial assurance. We decided that such contracts are permissible. We then asked the Board, on remand, to evaluate the adequacy of the particular contracts PFS planned to use. We did not resolve a then-nonexistent controversy whether prices must be in a predetermined amount or whether a description of costs covered by the contract would suffice. Because the issue of how PFS should bill its customers was not before the Commission at that time, the law of the case doctrine does not apply. In addition, Commission jurisprudence has long provided that various repose doctrines must give way where “changed circumstances” or “public interest factors” dictate.<sup>32</sup>

### ***3. Utah Is Not Harmed by the Change in PFS’s Pricing Scheme***

We see no harm to Utah from either the change in PFS’s pricing plan or the timing of that change. Utah has not shown that the MSA failed to include any costs that PFS is likely to incur. The point of requiring PFS to produce a

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<sup>31</sup> Utah Brief at 10.

<sup>32</sup> *Alabama Power Co.* (Joseph M. Farley Nuclear Plant, Units 1 and 2), CLI-74-12, 7 AEC 203, 204 (1974). See *Ohio Edison Co.* (Perry Nuclear Power Plant, Unit 1), LBP-92-32, 36 NRC 269, 283-84 (1992).



model contract was to give Utah and the Board an opportunity to look for such deficiencies. Having already participated in a 4-day evidentiary hearing on cost estimates, Utah should have had a good idea of the type of O&M costs PFS expects to encounter. In addition, PFS submitted a detailed description of every change in its financing plan from what was contemplated at the time of hearing and what was eventually reflected in the MSA.<sup>33</sup> Therefore, when presented with the MSA, Utah was in a good position to examine the MSA to see if there were any omissions.

Utah insists that a contract that does not set a price in advance for all services provides less assurance that PFS will meet expenses. On one hand, a contract that does not name prices may invite the customer to quibble over whether an expense was properly incurred. But on the other hand, contracts with flexible rather than set prices give better assurance against inflation and unexpected costs that might arise in the future. We find that the second consideration offsets the first. We agree with the Licensing Board that the MSA gives financial assurance comparable to that which would be given by a fixed-price contract.

We also see no harm to Utah from PFS changing its pricing plan after the June 2000 hearings. The purpose of those hearings was to establish the costs that will arise as PFS operates and maintains the storage facility, not to determine how PFS will meet those costs. The Board's refusal to reopen the evidentiary record was grounded on this distinction.<sup>34</sup>

#### **4. PFS Has Estimated the Costs of Operation as Required by NRC Regulations**

Utah argues PFS's plan violates 10 C.F.R. § 72.22(e), which contains a requirement that the Licensee estimate costs. Specifically, our regulations require the license applicant to provide "reasonable assurance" that it can cover the "estimated costs" of operating and decommissioning the facility. We agree that this regulation requires that costs be estimated. Logically, the Licensing Board cannot find that a licensee is reasonably assured of meeting its "estimated costs" if it has no understanding of those estimates (e.g., the kinds of costs) and how they are to be recorded. We found in *Claiborne Enrichment Center* that a reasonable cost estimate indicates that the licensee "understands its funding commitment and has seriously considered the factors that will contribute to the expense of the project it is undertaking."<sup>35</sup>

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<sup>33</sup> See PFS cover pleading (Sept. 29, 2000) and Applicant's Identification of Additional Provisions That Embody Changes from Previous PFS Representations (Oct. 17, 2000).

<sup>34</sup> PID-E, slip op. at 78-80.

<sup>35</sup> See CLI-97-15, 46 NRC at 307.

Utah's approach, however, appears to convert the need to estimate costs into a need for an NRC-imposed control on the prices the Licensee will charge for its services. The Commission never intended in CLI-00-13 to dictate the prices in PFS's contracts to any extent beyond that necessary to offer reasonable assurance that PFS can meet costs over the life of its facility. The Board also found "nothing in the 'passthrough' concept that is violative of the agency's financial assurance regulations."<sup>36</sup>

We do not agree with Utah that using the proposed MSA without including set prices allows PFS to avoid duties imposed by regulation, including the need to estimate costs. PFS provided information relevant to cost estimates at a 4-day evidentiary hearing. The Board issued an order in excess of 100 pages concerning those costs.<sup>37</sup> The new financing scheme does not alter the costs, or the cost estimates, themselves.

Utah charges in its brief that removing the set prices from the proposed license condition would amount to a repeal of the regulation's requirement that costs be estimated. But the regulation only requires that the licensee show how it intends to pay for estimated costs; it never imposed a requirement that cost estimates be written into license conditions.

Utah also suggests that PFS is attempting to "evade" its responsibility to "estimate" costs so it can underfund construction and operating expenses in order to attract more customers. There is no logical connection between the passthrough contracts and PFS's supposed devious intent. Even if prices in service contracts were set by license condition, there is no guarantee that PFS would not cut costs on construction and operation and pocket the difference, assuming as Utah does that PFS has no compunction about compromising public safety.

In Utah's view, PFS can have no honest motive for changing from a set price contract to a passthrough contract. It argues that there "is no harm to PFS if the condition to estimate costs remains because the Board ruled favorably on its estimates." But there is possible harm to PFS if its estimates are wrong. If PFS encounters unexpectedly high costs due to a surge in prices for one or another component of its facility, or increased labor costs, it could be stuck with a money-losing venture. On the other hand, if some costs go down (for example, if the maker of the casks PFS intends to use suddenly were to slash its prices), PFS would have to cut the prices for its services to remain competitive with onsite storage.

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<sup>36</sup>MSA Decision, slip op. at 64.

<sup>37</sup>PID-E.

## 5. *The Relevance of Monticello*<sup>38</sup>

Utah argues that the Commission's ruling in the *Monticello* case is not reliable precedent for approving a passthrough contract because PFS's situation differs in a number of significant respects. In *Monticello*, NRC allowed the transfer of an operating license from an electric utility owner of the plant to its subsidiary, which would operate the plant. We found that a contract requiring the electric utility owner to pay all operating costs incurred by the nonutility operator was enough to establish the financial qualifications of the operator without further proof.

Utah points out three significant differences from the *Monticello* case. First, Utah argues that NRC had direct regulatory enforcement power to ensure the owner of the plants in *Monticello* paid the operator, but here NRC will have no enforcement authority to ensure that PFS customers actually pay their bills. Second, in *Monticello*, the owner of the plants had a financial incentive to ensure that the operator of its plants was paid in a timely fashion, whereas PFS's customers have no similar incentive. Third, in *Monticello*, there was an actual contract between the parties, rather than a hypothetical "model," on which NRC could base its financial assurance determination.

We agree that the differences between the PFS situation and that in *Monticello* are considerable. But we do not base approval of the MSA as a means to show financial assurance on the similarities between PFS and *Monticello*. Rather we look at the PFS contracts themselves and ask if the issues Utah raises are enough to destroy our confidence in PFS's financial qualifications. We already approved PFS's use of service contracts in CLI-00-13 and the only question here is whether a passthrough contract will meet expenses as well as a fixed-price contract. We have allowed the use of service contracts to show financial assurance where the high level of assurance present in *Monticello* was not available, as we did, for example, with the Claiborne Enrichment Center.<sup>39</sup> The dissimilarities with *Monticello* to which Utah points are not enough to convince us that a passthrough contract will not offer adequate assurance.

We observe that Utah's first two concerns — lack of NRC enforcement authority and customers' lack of incentive to pay — would be present regardless of whether the service contracts in question are fixed-price or passthrough. In *Claiborne*, we found that the applicant appeared to be financially qualified on the basis of its promises, incorporated in license conditions, that it would not proceed until it had 5-year contracts that would cover construction and initial operating

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<sup>38</sup>*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).

<sup>39</sup>*Claiborne*, CLI-97-15, 46 NRC at 304-06.

expenses. We did not base that decision on any direct enforcement authority to make the licensee's customers pay their bills.<sup>40</sup> Further, in *Monticello*, the finding of financial assurance was based on the owner's contractual duty and presumed ability to pay (because it was an electric utility), not on any authority NRC might have had to force the owner to pay.<sup>41</sup>

Finally, we ruled in CLI-00-13 that the financial demonstration required of a Part 72 applicant was comparable to that of the *Claiborne* Part 70 applicant, that is, not as rigid as the standard used for a power reactor operating license as the one in *Monticello*.<sup>42</sup>

### III. CONCLUSION

We find that PFS can demonstrate reasonable financial assurance so long as its license is subject to the condition that it use its MSA to cover all inventory accepted at the site.<sup>43</sup> This would make the obligation to use the approved contracts a continuing one, so that NRC Staff could review the contracts at any time to ensure that PFS is continuing to comply with the license condition. This both satisfies PFS's need for flexibility and allows us to find that PFS "has reasonable assurance of obtaining the necessary funds" to cover "estimated operating costs over the planned life of the ISFSL."<sup>44</sup> The Board's order requiring fixed prices in the service contracts and requiring sufficient contracts for a 1000-unit facility is *reversed*.

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<sup>40</sup> We did note, however, that the Staff's detailed technical review of applications, together with the Commission's inspection and enforcement tools, provide further assurance that operation will not jeopardize public health and safety. *Claiborne*, 46 NRC at 306-08.

<sup>41</sup> See CLI-00-14, 52 NRC at 48-50.

[W]e find the detailed requirements of [Part 50] not "applicable" to [the operator] [based on:] (1) the nature of [the operator's] licensed activities — i.e., operating the Prairie Island and Monticello plants, not funding them; (2) [the owner's] electric utility status; and (3) [the owner's] contractual commitment to assume full financial responsibility for funding the safe operation, maintenance, and decommissioning of the plants.

*Id.* at 50.

<sup>42</sup> *Id.* at 29-31.

<sup>43</sup> We have no reason to believe that PFS is planning to use dissimilar contracts for later customers. It seems unlikely that PFS's initial customers would agree to the MSA as written without some assurance that subsequent customers would also shoulder their *pro rata* share of fixed costs, for example. But the literal terms of LC-2 as previously written referred to contracts at the start of operations, not subsequent contracts.

<sup>44</sup> 10 C.F.R. § 72.22(e).

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 7th day of October 2004.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Nils J. Diaz**, Chairman  
**Edward McGaffigan, Jr.**  
**Jeffrey S. Merrifield**

**In the Matter of**

**Docket No. 72-22-ISFSI**

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

**January 5, 2005**

**MEMORANDUM AND ORDER**  
**(Original Version Contains Proprietary Information)**

Today we address numerous issues related to the disclosure or redaction of certain evidentiary and decisional material to which the Atomic Safety and Licensing Board referred in four as-yet-unpublished Memoranda and Orders in this independent spent fuel storage installation (ISFSI) licensing proceeding. Many of these issues reach us by way of cross petitions for review of a March 31, 2004 Memorandum and Order (March 31st Order). In that order, the Board addressed various requests for either disclosure or redaction of certain financially related information contained in the four prior orders of the Board. Similar issues stem from our own request that the parties indicate what information they believe we should redact from CLI-04-10 (a Commission order accepting for review certain issues involving financial assurance, published as Attachment 1 to CLI-05-8, 61 NRC 131 (2005)).

Private Fuel Storage (PFS), in its petition for review, challenges the Board's decision not to withhold what PFS considers proprietary information concerning

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\*This is the redacted public version of the Commission's sealed Memorandum and Order dated January 5, 2005, and does not include the proprietary information contained in the sealed version.

a settlement agreement between PFS and former intervenors Castle Rock Land and Livestock Company, L.C., Skull Valley Company, Ltd., and Ensign Ranches of Utah, L.C. (collectively, Castle Rock). PFS also appeals the Board's refusal to withhold what PFS considers confidential information concerning PFS's Model Service Agreement (MSA), under which PFS would pass through all its construction, operating, maintenance, and decommissioning costs to its storage customers.<sup>1</sup> And last, PFS seeks Commission approval for additional redactions that PFS had not requested from the Board during the hearing.

The State of Utah opposes PFS's position on three grounds: PFS has failed to show competitive harm from disclosure; the requested redactions would distort the bases and effects of the underlying reasons upon which the Board and Commission relied in finding PFS financially qualified; and PFS's latest requests for redaction are untimely. In addition, Utah has filed its own petition for review in which it asks us to reverse every one of the Board's rulings granting redaction of information contained in the Board's four decisions. Utah and PFS have, between them, placed virtually the entire March 31st Order before us on appeal. Utah also seeks disclosure of similar information from various parts of the administrative record.

Finally, we have before us the parties' arguments as to what portions of CLI-04-10 (March 24, 2004) should be redacted prior to that order's release to the public. The parties' positions regarding redactions from CLI-04-10 echo their views concerning redactions from the Board's four orders.

Today, we affirm in part and reverse in part the Board's March 31st Order, and we rule on the disclosure or redaction of various kinds of information in the record and in the Board's and Commission's decisions. We also require PFS to prepare redacted versions of those documents, consistent with the rulings in the instant order. Finally, we provide for Board and Commission review of those versions, to ensure such consistency.

## I. PROCEDURAL BACKGROUND

On March 31, 2004, the Board issued an order ruling both on Utah's two requests for disclosure of evidentiary materials<sup>2</sup> related to the "Financial Assurance" contentions (Utah E/Confederated Tribes F), and also on all parties' arguments regarding redaction of portions of four as-yet-unpublished Board

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<sup>1</sup> See March 31st Order, slip op. at 29-31.

<sup>2</sup> The materials are hearing transcripts, exhibits, prefiled testimony, and cross-examination plans. See unpublished Memorandum, "Notice Regarding Issuance of Decision," dated April 30, 2004, at 1-2.

Memoranda and Orders involving both the ‘Financial Assurance’ contentions and the ‘Decommissioning’ contention (Utah S).<sup>3</sup>

The Board addressed these requests and arguments by applying 10 C.F.R. § 2.790(a)(4), which provides that the agency will withhold from the public ‘‘commercial or financial information obtained from a person and privileged or confidential,’’ and 10 C.F.R. § 2.790(b)(4), which sets forth five factors to consider in making such a determination. As for the information that the Board found ‘‘privileged or confidential,’’ the Board then, under section 2.790(b)(5), balanced ‘‘the right of the public to be fully apprised as to the bases for and effects of [PFS’s] proposed action’’ against ‘‘the demonstrated concern for protection of a competitive position.’’ The Board redacted part of the evidentiary and decisional material at issue.

On April 15th, both PFS and Utah sought our review of the Board’s March 31st Order. On June 9th, we issued CLI-04-16 granting the two petitions and permitting the parties to file supplemental briefs.<sup>4</sup>

## II. APPLICABLE LEGAL STANDARD

PFS seeks nondisclosure of various pieces of information on the ground that they constitute proprietary commercial information whose public release would harm PFS’s competitive position. PFS relies on section 2.790 of our procedural regulations, which sets forth the standards for withholding information from the public in proceedings (such as this one) adjudicated under 10 C.F.R. Part 2, Subpart G.<sup>5</sup> Section 2.790(b)(4) sets forth five factors for the Commission

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<sup>3</sup>The Board issued three of these orders on May 27, 2003, and the fourth on January 5, 2004. To avoid confusion, we will refer to the three May 27th orders as follows:

Memorandum and Order (Rulings on Summary Disposition Motion and Other Filings Relating to Remand from CLI-00-13 [52 NRC 23 (2000)])	‘‘MSA Order’’
Partial Initial Decision (Contention Utah E/Confederated Tribes F, Financial Assurance)	‘‘Financial Assurance Order’’
Partial Initial Decision (Contention Utah S, Decommissioning)	‘‘Decommissioning Order’’

<sup>4</sup> 59 NRC 355.

<sup>5</sup> Effective February 13, 2004, the Commission renumbered section 2.790 as section 2.390, but did not modify its language. Final Rule: ‘‘Changes to Adjudicatory Process,’’ 69 Fed. Reg. 2182, 2219, 2254-56 (Jan. 14, 2004). The revised procedural rules do not, however, apply in the instant case.



to consider when determining whether information at issue is “confidential or privileged commercial or financial information”:

- (i) Whether the information has been held in confidence by its owner;
- (ii) Whether the information is of a type customarily held in confidence by its owner and, except for voluntarily submitted information, whether there is a rational basis therefor;
- (iii) Whether the information was transmitted to and received by the Commission in confidence;
- (iv) Whether the information is available in public sources;
- (v) Whether public disclosure of the information sought to be withheld is likely to cause substantial harm to the competitive position of the owner of the information, taking into account the value of the information to the owner; the amount of effort or money, if any, expended by the owner in developing the information; and the ease or difficulty with which the information could be properly acquired or duplicated by others.<sup>6</sup>

Applicants seeking redaction must address these criteria with specificity.<sup>7</sup> If the Commission determines that any of the information is in fact “confidential commercial or financial information,” then the Commission must determine “whether the right of the public to be fully apprised as to the bases for and effects of the proposed action outweighs the demonstrated concern for protection of a competitive position.”<sup>8</sup>

This agency has produced scant jurisprudence applying section 2.790 to commercial or financial information. But that regulatory section embodies the standards of Exemption 4<sup>9</sup> of the Freedom of Information Act (FOIA),<sup>10</sup> so we look for guidance to the plentiful federal case law on that exemption.<sup>11</sup>

Under Exemption 4, the current generally accepted legal definition of “confidential” is information whose disclosure is likely to (1) impair the government’s future ability to obtain necessary information; or (2) impair other government interests such as compliance, program efficiency and effectiveness, and the ful-

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<sup>6</sup> 10 C.F.R. § 2.790(b)(4)(i)-(v).

<sup>7</sup> 10 C.F.R. § 2.790(b)(1)(iii).

<sup>8</sup> 10 C.F.R. § 2.790(b)(5).

<sup>9</sup> See *General Electric Co. v. NRC*, 750 F.2d 1394, 1397 (7th Cir. 1984).

<sup>10</sup> 5 U.S.C. § 552(b)(4). “It is not the Commission’s intent to permit a greater degree of withholding of documents from public disclosure under § 2.790 than would be permitted under the Freedom of Information Act.” Final Rule: “Restructuring of Facility License Application Review and Hearing Process,” 37 Fed. Reg. 15,127 (July 28, 1972).

<sup>11</sup> This agency has similarly looked for guidance to federal court decisions involving FOIA Exemption 5. See *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), LBP-82-82, 16 NRC 1144, 1163-64 (1982) (executive privilege). See also March 31st Order, slip op. at 31 (considering two court decisions regarding Exemption 4 as “guidance”).

fillment of an agency's statutory mandate; or (3) cause substantial harm to the competitive position of the person from whom the information was obtained.<sup>12</sup> PFS raises only the third prong, so we need not reach the issue of a disclosure's adverse effect on the government. The federal courts have interpreted the third prong to require a showing of (a) the existence of competition and (b) the likelihood of substantial competitive injury.<sup>13</sup>

Federal court decisions are, however, divided on the question as to what constitutes "competitive injury." One line of cases concludes that such injury can flow from either competitors or noncompetitors (such as customers and suppliers).<sup>14</sup> A second line of cases interprets "competitive injury" more narrowly, limiting the phrase's scope to injury directly caused by a competitor's use of the information.<sup>15</sup> The Board in its March 31st Memorandum and Order adopted the narrower interpretation. As explained in detail below, we find the broader interpretation to be closer to the heart of Exemption 4 and 10 C.F.R. § 2.790, and thus we adopt it.

### III. DISCUSSION

#### A. Existence of Competitors

As noted above, PFS's claim of "competitive harm" depends on a showing that it has competitors for its services. Three years ago, in *Utah v. Department of the Interior*, a FOIA case involving (among other parties) PFS and Utah, the Tenth Circuit considered this very issue and found expressly that "actual

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<sup>12</sup> See, e.g., *McDonnell Douglas Corp. v. National Aeronautics and Space Administration*, 180 F.3d 303, 305 (D.C. Cir. 1999), *reh'g en banc denied*, No. 98-5251 (D.C. Cir. Oct. 6, 1999); *Critical Mass Energy Project v. NRC*, 975 F.2d 871, 879 (D.C. Cir. 1992) (*en banc*), *cert. denied*, 507 U.S. 984 (1993), *approving on this ground but rev'g and vacating on other grounds*, 830 F.2d 278, 286 (D.C. Cir. 1987); *9 to 5 Organization for Women Office Workers v. Board of Governors of the Federal Reserve System*, 721 F.2d 1, 7-10 (1st Cir. 1983).

<sup>13</sup> See, e.g., *CNA Financial Corp. v. Donovan*, 830 F.2d 1132, 1152 (D.C. Cir. 1987), *cert. denied*, 485 U.S. 977 (1988); *National Parks & Conservation Association v. Kleppe*, 547 F.2d 673, 679 (D.C. Cir. 1976).

<sup>14</sup> See, e.g., *McDonnell Douglas Corp. v. National Aeronautics and Space Admin.*, 180 F.3d at 306, 307; *National Parks & Conservation Ass'n v. Kleppe*, 547 F.2d at 687; *Continental Oil Co. v. Federal Power Commission*, 519 F.2d 31, 35 (5th Cir. 1975), *cert. denied*, 425 U.S. 971 (1976). See generally Final Rule: "Critical Energy Infrastructure Information," Order No. 630, 102 FERC P 61,190, Appendix B, 2003 WL 21436754 at \*29 (FERC) ("a submitter may be able to show competitive harm where use of the information by someone other than a competitor could cause financial harm to the submitter"), *reh'g denied and opinion modified on other grounds*, Order No. 630-A, 104 FERC P 61,106, 2003 WL 21716351 (FERC 2003).

<sup>15</sup> See *CNA Financial*, 830 F.2d at 1152; *Public Citizen Health Research Group v. Food and Drug Administration*, 704 F.2d 1280, 1291 n.30 (D.C. Cir. 1983).

competition [for PFS] exists.”<sup>16</sup> The court pointed to a PFS affidavit maintaining that “the storage of spent nuclear fuel ‘is a competitive business.’”<sup>17</sup> In our case, the Licensing Board relied upon the Tenth Circuit’s *Utah* decision to find sufficient “competition” to justify PFS’s proprietary claim.<sup>18</sup>

Ordinarily, under principles of collateral estoppel, losing parties are not free to relitigate already-decided questions in subsequent cases involving the same parties.<sup>19</sup> But Utah argues on the current appeal that PFS’s competitive situation has changed since the Tenth Circuit decision. Utah maintains that it now is clear that PFS has no competitors, and therefore PFS cannot be said to suffer a “competitive harm to [its] competitive position” from disclosing the information at issue here.<sup>20</sup> Utah chiefly relies on our own recent statement in CLI-04-10 that “PFS . . . has no competitors now or in the foreseeable future for private, away-from-reactor dry storage.”<sup>21</sup>

Utah puts more weight on the quoted language than it can bear. Our comment on “away-from-reactor dry storage” amounted to *dicta* supporting our view that PFS seemingly faces a more favorable competitive environment than another company, Louisiana Energy Services, with an analogous financial plan that we had also approved. Our comment did not announce a formal fact finding, resting on affidavits or record evidence, of changed circumstances. Thus it does not override the preclusive force of the Tenth Circuit’s holding in the *Utah* case on the precise question — whether PFS has competitors — at stake here.

In any event, our statement in CLI-04-10 was quite limited. We mentioned “private, away-from-reactor dry storage” only. We said nothing about onsite storage at reactors. The omission is significant, for even if, as we indicated in CLI-04-10, away-from reactor competitors are unlikely “now or in the foreseeable future,” PFS faces actual (and potential) competition from numerous reactor licensees who are now using or are thinking about constructing their own onsite storage facilities.

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<sup>16</sup> 256 F.3d 967, 971 (10th Cir. 2001).

<sup>17</sup> *Id.* at 970.

<sup>18</sup> See March 31st Order, slip op. at 15-17.

<sup>19</sup> See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-02-20, 56 NRC 169, 181-84 (2002) (discussing authorities). See also *Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), CLI-93-16, 38 NRC 25, 38 & n. 27 (1993). The collateral estoppel doctrine does not call for an inquiry into “the correctness of the prior decision.” See *Private Fuel Storage*, LBP-02-20, 56 NRC at 182.

<sup>20</sup> See, e.g., Utah’s Reply to PFS’s Supplemental Brief, dated July 16, 2004, at 1.

<sup>21</sup> Utah’s Response to Applicant’s Petition for Review, dated Feb. 2, 2004, at 7, quoting CLI-04-10, slip op. at 12 [61 NRC at 139].

Both Utah and the NRC Staff have long been aware of, and have repeatedly commented on, this particular source of competition.<sup>22</sup> The Staff's Final Environmental Impact Statement (2001) addressed — seven times — the issue of competition between PFS storage and onsite reactor storage.<sup>23</sup> And, prior to the filing of PFS's petition for review, Utah itself referred three times to this specific source of competition:

PFS has an incentive to cut costs so as to retain existing customer business and to attract new business by offering fuel storage competitive with on-site dry storage.<sup>24</sup>

[i]f PFS is granted a license for this facility, the only potential competitors to PFS may be the PFS customers who already have on-site ISFSIs.<sup>25</sup>

[Referring to] the incentives PFS must offer customers if it is to be competitive with onsite storage.<sup>26</sup>

In short, treating onsite storage as a PFS “competitor” comes as no surprise. The record is replete with references to just that kind of competition.

Utah argues that the “onsite competition” argument comes too late. Utah points out that onsite storage was not the basis of the Board's decision on proprietary information, and was not argued by PFS until this appeal.<sup>27</sup> We reject Utah's timeliness complaint. As we explained above, the onsite competition point is hardly new to this litigation. It has come up repeatedly. Acting as an appellate body we are free to affirm a Board decision on any ground finding support in the record, whether previously relied on or not.<sup>28</sup>

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<sup>22</sup> For this reason, we reject Utah's argument that PFS is improperly raising this argument for the first time on appeal. Utah's Brief on Financial Information, dated June 30, 2004, at 7.

<sup>23</sup> See NUREG-1714, “Final Environmental Impact Statement: for the Construction and Operation of an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County Utah,” Docket No. 72-22 (Dec. 2001), at hyphenated pages 8-3, 8-10, G-415, G-416, G-422, G-426.

<sup>24</sup> Utah's Petition for Review of Contentions Utah E/Confederated Tribes F (Financial Assurance) & Utah S (Decommissioning), dated Jan. 15, 2004, at 16 n.29.

<sup>25</sup> Utah's Response to Applicant's Justification for Withholding Portions of Memorandum and Order (Rulings on Summary Disposition Motion and Other Filings Relating to Remand from CLI-00-13), Partial Initial Decision (Contention Utah E/confederated Tribes F), and Partial Initial Decision (Contention Utah S) from Public Disclosure, dated July 14, 2003, at 6.

<sup>26</sup> Utah's Response to Applicant's Petition for Review of Memorandum and Order Granting and Denying in Part Motion for Reconsideration and/or Clarification of Financial Qualifications Decisions at 6 n.12.

<sup>27</sup> Utah's Brief on Financial Information at 7.

<sup>28</sup> See, e.g., *Hertz v. Luzenac America, Inc.*, 370 F.3d 1014, 1017 (10th Cir. 2004); *Carney v. American University*, 151 F.3d 1090, 1096 (D.C. Cir. 1998).

## B. Information Regarding Castle Rock Settlement Agreement

The Board, in the Financial Assurance Order,<sup>29</sup> considered the issue of PFS's financial qualifications under 10 C.F.R. § 72.22 and, in that context, addressed the issue whether PFS had provided reasonable estimates of its construction and operating costs. Part of the Board's analysis of this cost issue concerned the costs stemming from PFS's settlement agreement with Castle Rock, a group of owners of land bordering on the PFS site. PFS had initially requested that the Board redact the information regarding the existence and terms of the settlement, but it later reduced the scope of its request to cover only the terms, i.e., x x x x x x.<sup>30</sup> PFS had argued that public disclosure of x x x x x x x x x x. The Board, in its March 31, 2004 Order, declined PFS's request. The Board reasoned that, although disclosure of the settlement-related information might cause PFS "financial" harm, the harm would not be "competitive," and would therefore not satisfy the fifth factor set forth in 10 C.F.R. § 2.790(b)(4) — "substantial harm to the competitive position of the owner of the information."

On appeal, PFS argues (among other things) that disclosure would generally undermine parties' reliance on the confidentiality of the terms of their settlements, and would thus contravene the Commission's policy of favoring settlements of adjudicatory proceedings.<sup>31</sup> *Amicus Curiae* Castle Rock supports this argument, emphasizing that the confidentiality of the terms and conditions of the settlement agreement was and continues to be "of the utmost importance"<sup>32</sup> to it and that it "would have been reluctant to settle absent" such confidential treatment.<sup>33</sup>

According to Castle Rock, the settlement included x x x x x x x x x x. This x x x x x x is contingent upon the licensing and operation of the proposed PFS facility. Neither the terms of the settlement nor the March 31st Order refer to this x x x x x x x x x x<sup>34</sup> x x x x x x x x x x.

We agree with the conclusion of PFS and Castle Rock. Section 2.759 of our procedural regulations stresses the important role settlements play in our adjudicatory program:

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<sup>29</sup> Financial Assurance Order, slip op. at 86, 92-93.

<sup>30</sup> See p. 169, *infra*.

<sup>31</sup> PFS's Petition for Review, dated April 15, 2004, at 6; PFS's Supplemental Brief, dated June 30, 2004, at 2-3, 4-6.

<sup>32</sup> Motion by Castle Rock for Leave To File an *Amicus Curiae* Brief, dated June 30, 2004, at 2. We grant Castle Rock's Motion.

<sup>33</sup> See *Amicus Curiae* Brief of Castle Rock, dated June 30, 2004, *passim*, and particularly 5-8; Affidavit and Declaration of Christopher F. Robinson [on behalf of Castle Rock], dated June 30, 2004, at 3.

<sup>34</sup> See *Amicus Curiae* Brief of Castle Rock at 3-4, 6-8. The NRC Staff supports Castle Rock's assertions of competitive harm. See NRC Staff's Brief in Reply to PFS, dated July 16, 2004, at 3.

The Commission recognizes that the public interest may be served through settlement of particular issues in a proceeding or the entire proceeding. Therefore, to the extent it is not inconsistent with hearing requirements in section 189 of the [Atomic Energy] Act (42 U.S.C. [§] 2239), the fair and reasonable settlement of contested initial licensing proceedings is encouraged. It is expected that the presiding officer and all the parties to those proceedings will take appropriate steps to carry out this purpose.<sup>35</sup>

Likewise, our decisions have consistently expressed our support for settlements.<sup>36</sup> Were we to disclose to the public the proprietary information from the PFS-Castle Rock settlement, we would not only undermine one of the principal grounds of that settlement, but we would also discourage parties from settling their financial disputes in the future, for fear that we would likewise publicly disclose the proprietary information in their settlements. This would, in turn, hinder the fulfillment of our statutory mandate to protect the public health and safety.<sup>37</sup>

Although we do not today take a hard-and-fast position that we will *never* reveal the contents of a confidential settlement agreement, we believe the circumstances of this case justify redacting from Board orders the contents of the PFS-Castle Rock settlement. The importance of honoring the settling parties' expectations of confidentiality is particularly strong in this proceeding because *both* parties to the settlement oppose disclosure of its terms on grounds of potential financial harm.<sup>38</sup>

We disagree with Utah that FOIA allows us no discretion to withhold x x x x x x x x x x x x x x x x.<sup>39</sup> Settlement documents fall within the bounds of Exemption 4,<sup>40</sup> and federal courts have repeatedly refused disclosure requests where, as with Castle Rock and PFS, the information's release will harm the negotiating position

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<sup>35</sup> 10 C.F.R. § 2.759.

<sup>36</sup> See, e.g., *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-97-13, 46 NRC 195, 205 (1997), and cited authority.

<sup>37</sup> See generally *9 to 5 Org.*, 721 F.2d at 10; *Public Citizen Health Research Group v. National Institutes of Health*, 209 F. Supp. 2d 37, 53 (D.D.C. 2002); *Nadler v. Federal Deposit Insurance Corp.*, 899 F. Supp. 158, 162, 163 (S.D.N.Y. 1995), *aff'd*, 92 F.3d 93 (2d Cir. 1996).

<sup>38</sup> The law does not require certainty of injury in these situations; possibility of injury is sufficient. See, e.g., *Public Citizen Health Research Group v. Food & Drug Admin.*, 704 F.2d at 1291.

<sup>39</sup> Utah's Reply to PFS's Supplemental Brief at 4.

<sup>40</sup> *MA-COM Information Systems, Inc. v. United States Department of Health and Human Services*, 656 F. Supp. 691, 692 (D.D.C. 1986) ("it is in the public interest to encourage settlement negotiations in matters of this kind and it would impair the ability of HHS to carry out its governmental duties if disclosure of this kind of material under FOIA were required"). Cf. *Goodyear Tire & Rubber Co. v. Chiles Power Supply*, 332 F.3d 976, 983 (6th Cir. 2003) (recognizing a "settlement negotiation privilege," albeit not in a FOIA context).

of a party in any future x x x x x x x x.<sup>41</sup> Indeed, in a case involving both PFS and Utah, the Tenth Circuit refused (under FOIA) to order PFS to disclose to Utah its lease arrangements with the Goshute Tribe on the ground, *inter alia*, that disclosure might weaken both PFS's and the Tribe's future bargaining positions.<sup>42</sup> (As noted above, the Tenth Circuit also found that PFS faced competition.<sup>43</sup>)

The purpose of FOIA — and section 2.309 — “is not fostered by disclosure of information about private citizens . . . that reveals little or nothing about an agency's own conduct.”<sup>44</sup> Whether under FOIA or otherwise, the government need only disclose private parties' information if it “informs citizens about what their government is up to.”<sup>45</sup> The settlement terms at issue in this proceeding shed little or no light on the NRC's conduct or decision. So when we balance the public's need for this information against PFS's and Castle Rock's need to keep the information out of the public domain,<sup>46</sup> the balance strongly favors the latter interest.<sup>47</sup>

Before leaving this topic, we need to address briefly Utah's remaining three arguments. Utah first directs our attention to the fact that the existence of the Castle Rock settlement is already public knowledge.<sup>48</sup> Utah's point, while correct as to the settlement's *existence*, is irrelevant to the issue of whether to redact the settlement's terms. PFS's and Castle Rock's principal concerns are not about public knowledge of the settlement's existence but rather about public knowledge of its x x x x x x terms.<sup>49</sup> In this regard, PFS points out that all of its current requests for redaction of references to the Castle Rock settlement relate solely to those terms.<sup>50</sup> Utah has not challenged PFS's statement.

Next, Utah points out that it seeks release of only x x x x x x x x, not the entire terms of the settlement.<sup>51</sup> The narrowness of the scope of Utah's disclosure request does not, in our view, determine whether we should disclose the x x x x x

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<sup>41</sup> See, e.g., *Flathead Joint Board of Control v. United States Department of Interior*, 309 F. Supp. 2d 1217, 1221, 1222 (D. Mont. 2004); *Starkey v. United States Department of the Interior*, 238 F. Supp. 2d 1188, 1195 (S.D. Cal. 2002).

<sup>42</sup> *Utah v. Department of Interior*, 256 F.3d at 970-71.

<sup>43</sup> *Id.*

<sup>44</sup> *Department of Justice v. Reporters Committee for Freedom of the Press*, 489 U.S. 749, 773 (1989); *McDonnell Douglas Corp. v. Department of the Air Force*, 375 F.3d 1182, 1193 (D.C. Cir. 2004).

<sup>45</sup> *McDonnell Douglas Corp. v. Department of the Air Force*, 375 F.3d at 1193 (internal quotation marks omitted).

<sup>46</sup> 10 C.F.R. § 2.790(b)(5).

<sup>47</sup> See generally *Utah v. Department of the Interior*, 256 F.3d at 971.

<sup>48</sup> Utah's Response to Applicant's Petition for Review at 3 n.4.

<sup>49</sup> See, e.g., PFS's Petition for Review at 6 & n.15; PFS's Supplemental Brief at 2 n.7.

<sup>50</sup> See PFS's Supplemental Brief at 2-3 n.7. See also p. 167, *supra*.

<sup>51</sup> Utah's Reply to PFS's Supplemental Brief at 4.

x x x. As discussed above, the public release of this x x x x x x x could harm the future negotiating positions of the two parties to the settlement, undermine their joint expectation of confidential treatment, and weaken the confidence of future parties in the NRC's willingness to keep such settlement-related information confidential.

Finally, Utah contends that PFS has the option of keeping the Castle Rock information out of the public domain x x x x x x x, and that consequently PFS has failed to show competitive harm as required for redaction of information that the NRC requires an applicant to submit.<sup>52</sup> Again, we disagree. Under our regulations, the confidential treatment of settlement information does not turn on x x x x x x x.

For these reasons, we reverse the Board's rulings declining to redact from its orders information about the terms of the Castle Rock settlement.

### C. Information Regarding PFS's Model Service Agreement

Earlier in this proceeding, PFS had argued that the terms of its MSA provide reasonable assurance that PFS would have sufficient funds to build and operate its facility and meet the Commission's license conditions regarding financial assurance. The Board agreed,<sup>53</sup> relying in significant part on the fact that the MSA would pass all construction, operation, and decommissioning costs along to PFS's customers.<sup>54</sup> The Board, in its January 5, 2004 order, declined to reconsider this conclusion.<sup>55</sup>

PFS then asked the Board to redact, for reasons of confidentiality, those portions of the Board's various MSA discussions that, according to PFS, revealed its intent to pass through 100% of its costs to its customers. PFS also argued that the Board's discussion of the Commission's decision in *Monticello* (where we had discussed an arguably analogous 100% cost-passthrough arrangement)<sup>56</sup> would "strongly imply to a reader"<sup>57</sup> that PFS intended to adopt the same passthrough arrangement as in *Monticello*. PFS claimed that this revelation would provide its customers and vendors with unfair advantages over PFS in their negotiations

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<sup>52</sup> Utah's Response to Applicant's Petition for Review at 9; Utah's Response to Applicant's Motion for Stay, dated April 20, 2004, at 6 n.14.

<sup>53</sup> Financial Assurance Order, slip op. at 67, 101-02.

<sup>54</sup> MSA Order, slip op. at 59-60.

<sup>55</sup> Memorandum and Order (Granting in Part and Denying in Part Motion for Reconsideration and/or Clarification of Financial Qualifications Decisions) (Jan. 5, 2004) ("Reconsideration Order"), *rev'd*, CLI-04-27 (Oct. 7, 2004), published at 61 NRC 145 (2005) as Attachment 2 to CLI-05-8.

<sup>56</sup> *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), *reconsidered and denied*, CLI-00-19, 52 NRC 135 (2000).

<sup>57</sup> Applicant's Motion for Stay, dated April 13, 2004, at 3. *See also* Applicant's Supplemental Brief at 6-8.



with PFS, and would also harm PFS vis-a-vis any competitors who might seek to enter the market and undercut PFS's prices for spent fuel storage.<sup>58</sup> The Board rejected this line of argument on the ground that its orders neither delved into the details of the MSA's cost-passthrough terms nor suggested through its citations to *Monticello* that PFS was planning to use the same passthrough arrangement.<sup>59</sup>

On appeal, PFS acknowledges that, with a single exception, the Financial Assurance Order reveals no information that would cause PFS competitive financial harm.<sup>60</sup> However, according to PFS, the MSA Order and the Reconsideration Order do reveal PFS's intent to pass *all* its costs through to its customers. PFS asserts that this revelation stems from two features of those last two decisions: they discuss no funding mechanisms other than the MSA, and they also cite the Commission's *Monticello* decision dealing with 100% cost-passthrough.<sup>61</sup>

As we noted above, federal courts have redacted commercial information under FOIA's Exemption 4 if the party seeking redaction can show both (a) the existence of competition and (b) the potential for competitive injury.<sup>62</sup> We require the same demonstration from parties who ask us to withhold purportedly "confidential or privileged commercial or financial information" pursuant to section 2.790. Although PFS has shown the existence of competition (*see pp.* 164-66, *supra*), we conclude for the reasons given below (*see pp.* 177-78) that it has failed to demonstrate the possibility of competitive injury from the public disclosure of PFS's 100% passthrough proposal. We therefore hold that citations to *Monticello* and information regarding PFS's 100% passthrough MSA should be publicly disclosed. At the same time, we hold that various specific aspects of PFS's financial arrangements are not suitable for disclosure and should be redacted.

### ***1. Legal Definition of "Competitive Harm"***

Utah asserts that injury suffered from suppliers and customers does not constitute "competitive harm" required under federal case law.<sup>63</sup> Utah acknowledges, however, that the federal courts are split as to "whether competitive harm must flow from use of information directly by competitors, or whether competitive

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<sup>58</sup> *See, e.g.*, PFS's Justification for Withholding Portions of the Memorandum and Order, dated July 3, 2004, at 2.

<sup>59</sup> March 31st Order, slip op. at 31.

<sup>60</sup> PFS's Petition for Review at 4 n.11, 7-8 & n.16; PFS's Motion for Stay at 9, *as revised in* Clarification and Correction to Applicant's Motion for Stay, dated April 16, 2004, at 2.

<sup>61</sup> PFS's Petition for Review at 7-8.

<sup>62</sup> *See, e.g.*, *CNA Financial*, 830 F.2d at 1152; *National Parks & Conservation Ass'n v. Kleppe*, 547 F.2d at 679.

<sup>63</sup> Utah's Brief on Financial Information at 5-6 & n.10.

harm can result from use of information by a business's customers, suppliers, etc., thereby damaging the position of the business vis-a-vis its competitors."<sup>64</sup> As noted at p. 164, *supra*, there are two opposing lines of Exemption 4 decisions in which the federal courts (mainly the United States Court of Appeals for the District of Columbia Circuit) address this question.<sup>65</sup> Such case law, like Exemption 4 itself, provides us guidance, though it does not bind us in this area of law.<sup>66</sup>

A pair of District of Columbia Circuit decisions from the 1980s held that "competitive harm in the FOIA context . . . is . . . limited to harm flowing from the affirmative use of proprietary information *by competitors*."<sup>67</sup> But a 1999 case from the same Circuit appears incompatible with those earlier cases. In *McDonnell Douglas Corp. v. NASA*, the D.C. Circuit found in an Exemption 4 context that disclosure of government contract prices would harm the submitter of that information by permitting its "commercial customers to bargain down ('ratchet down') its prices more effectively."<sup>68</sup> In approving the rejection of a petition for rehearing *en banc*, Judge Silberman explained in a concurring opinion that, "other than in a monopoly situation[,] anything that undermines a supplier's relationship with its customers must necessarily aid its competitors."<sup>69</sup>

The result in *McDonnell Douglas* is consistent with the well-established rule that a company can demonstrate substantial harm to its competitive position without showing "actual competitive harm," i.e., harm directly caused by disclosure of information to a company's competition.<sup>70</sup> Rather, all that is required under

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<sup>64</sup> *Id.* at 6 n.11. Utah asserts that this "competitive injury" issue becomes relevant only where an entity claiming confidentiality has already demonstrated "actual competition" — something Utah claims that PFS does not have. *See id.* at 6. Given our finding above that PFS does have actual competition, we do not address Utah's assertion.

<sup>65</sup> The D.C. Circuit decisions carry particular weight regarding this issue because it oversees the United States District Court for the District of Columbia, which is the court of universal venue for FOIA cases. *See* 5 U.S.C. § 552(a)(4)(B).

<sup>66</sup> *Shoreham*, LBP-82-82, 16 NRC at 1163; *Wisconsin Electric Power Co.* (Point Beach Nuclear Plant, Units 1 and 2), LBP-82-42, 15 NRC 1307, 1316 (1982) ("When there is a Commission regulation, duly promulgated, coexisting with other precedent in the general area, the regulation is controlling"). *Compare* 10 C.F.R. § 2.790(a)(4) & (b)(4) with 10 C.F.R. § 9.17(a)(4) (the Commission's regulation actually implementing Exemption 4 of FOIA). The latter regulation was promulgated to implement FOIA, while the former was not. *Kansas Gas and Electric Co.* (Wolf Creek Generating Station, Unit 1), ALAB-327, 3 NRC 408, 415 (1976).

<sup>67</sup> *Public Citizen Health Research Group v. Food & Drug Admin.*, 704 F.2d at 1291 n.30 (emphasis added). *Accord CNA Financial*, 830 F.2d at 1154 & n.158 (quoting *Public Citizen*).

<sup>68</sup> 180 F.3d at 306.

<sup>69</sup> United States Dep't of Justice, *Freedom of Information Act Guide & Privacy Act Overview* at 325 n.311 (May 2004), quoting *McDonnell Douglas Corp. v. NASA*, No. 98-5251, slip op. at 2 (D.C. Cir. Oct. 6, 1999) (Silberman, J., concurring in denial of reh'g *en banc*).

<sup>70</sup> *Gulf & Western Industries, Inc. v. United States*, 615 F.2d 527, 530 (D.C. Cir. 1979) (emphasis added).

Exemption 4 is a showing that it faces both actual competition and a *likelihood* of substantial competitive injury.<sup>71</sup>

The D.C. Circuit is not the only court to conclude that “competitive harm” under Exemption 4 may come from sources other than direct competitors. The Tenth Circuit, in a case involving both PFS and Utah, has ruled that such injury may come from the use of the confidential information by “*suppliers, contractors, labor organizations, creditors, and customers of PFS and the facility.*”<sup>72</sup> Analogously, the Second Circuit ruled that “[t]he fact that [the] harm would result from active hindrance by [an opposing citizens group] rather than directly by potential competitors does not affect the fairness considerations that underlie Exemption Four.”<sup>73</sup> And our own Licensing Board took the following similar position in 1988: “substantial economic harm to the information’s owner may be protected under Exemption 4 even where no competitive position is at risk. . . . Exemption 4 is not by its terms limited to considerations of competitive harm.”<sup>74</sup>

## 2. *Risk of Competitive Harm*

Utah raises one general objection — that PFS’s evidentiary support of its claims of potential injury is too general to pass muster. We disagree. The affidavit and declarations from PFS’s Chairman, Mr. John D. Parkyn, are as specific as the affidavit that the Tenth Circuit found sufficiently detailed in *Utah v. United States Dep’t of the Interior*.<sup>75</sup>

We turn now to the question whether public release of certain *specific* categories of information from the evidentiary record and the decisions could result in a risk of competitive harm. Utah’s challenges regarding redaction of evidentiary and decisional materials regarding competitive injury are largely the same, the Board

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<sup>71</sup> See, e.g., *id.*, 615 F.2d at 530; *Niagara Mohawk Power Corp. v. Department of Energy*, 169 F.3d 16, 19 (D.C. Cir. 1999); *Frazee v. Forest Service*, 97 F.3d 367, 371 (9th Cir. 1996); *GC Micro Corp. v. Defense Logistics Agency*, 33 F.3d 1109, 1113 (9th Cir. 1994); *Public Citizen Health Research Group v. FDA*, 704 F.2d at 1291; *Public Citizen Health Research Group v. NIH*, 209 F. Supp. 2d at 46.

<sup>72</sup> *Utah*, 256 F.3d at 967, 970-71 (10th Cir. 2001) (emphases added). Utah attempts to distinguish the Tenth Circuit decision on the ground that it involved an *executed* lease while PFS’s MSA contracts have yet to be negotiated. We disagree. The Tenth Circuit’s ruling did not rely on the executed nature of the lease when determining whether it should be disclosed.

<sup>73</sup> *Nadler*, 92 F.3d at 97 (2d Cir. 1996), *aff’g* 899 F. Supp. 158, 163 (S.D.N.Y. 1995).

<sup>74</sup> *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-88-8, 27 NRC 293, 299 (1988) (citation omitted).

<sup>75</sup> 256 F.3d at 971. Compare the two affidavits (by Mr. Parkyn and Mr. Leon D. Bear) before the Tenth Circuit, appended to PFS’s Reply to Utah’s Objections, dated July 24, 2003, as Attachment D, with the affidavit and declarations of Mr. Parkyn, appended to Joint Filing of the Parties, dated July 3, 2003.

responded to them in largely the same way, and the legal factors for determining whether to redact these two kinds of material are the same. Therefore, to the extent Utah's arguments concern information that appears in both evidentiary and decisional material, we treat them together.

Utah's lines of argument comprise a series of challenges to the Board's disclosure-related factual findings<sup>76</sup> — an area in which we have traditionally deferred to the Board, and will reverse only if the findings are “clearly erroneous.”<sup>77</sup> As we explained recently in *Tennessee Valley Authority*:

We ordinarily defer to our licensing boards' fact findings, so long as they are not clearly erroneous. A clearly erroneous finding is one that is not even plausible in light of the record viewed in its entirety. . . . Although the Commission has the authority to reject or modify a licensing board's factual finding, it will not do so lightly. We will not overturn a hearing judge's findings simply because we might have reached a different result.<sup>78</sup>

The Board found that the release of four different categories of information appearing in both evidentiary and decisional material would impose on PFS specific risks of competitive harm. Those categories, which we address *seriatim*, are minimum capacity for the initial facility, bottom-line construction costs, categories of passthrough costs, and maximum onsite property insurance.

The Board concluded that release of the minimum capacity of the proposed PFS initial facility would result in competitive harm from potential competitors and customers.<sup>79</sup> According to the Board, not even Utah had suggested that PFS would suffer no injury from the revelation of this information.<sup>80</sup> On appeal, Utah neither contests this finding nor cites to any place in the hearing record where Utah makes such an argument.<sup>81</sup> We conclude, therefore, that the issue was not contested below, and that we do not need to reach it on appeal.

The Board next found that “disclosure of bottom-line costs for each of PFS's three planned phases of construction would cause PFS substantial competitive harm from competitors and potential customers.”<sup>82</sup> We accept the Board's con-

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<sup>76</sup> See Utah's Petition for Review, dated April 15, 2004, at 2 (“The overarching concern raised below by Utah is for full disclosure of the Board's four substantive” orders).

<sup>77</sup> 10 C.F.R. § 2.786(b)(4)(i), *recodified at* 10 C.F.R. § 2.341(b)(4)(i), effective February 13, 2004 (Final Rule: “Changes to Adjudicatory Process,” 69 Fed. Reg. 2182, 2219, 2251 (Jan. 14, 2004)).

<sup>78</sup> *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) (footnotes, citations, and internal quotation marks omitted).

<sup>79</sup> March 31st Order, slip op. at 17.

<sup>80</sup> *Id.*

<sup>81</sup> See Utah's Brief on Financial Information at 11.

<sup>82</sup> March 31st Order, slip op. at 18.

clusion that this cost information should not be released, though we disagree with one of the Board's two underlying justifications. As a matter of logic, we do not see how the revelation of these bottom-line costs could harm PFS's negotiating position vis-a-vis potential customers. No potential customer could realistically be expected to agree to a "cost-passthrough" agreement without knowing the amounts of those costs. Indeed, the MSA itself provides that customers may "reasonably request in writing information from PFS regarding the basis for and calculations of any invoiced amounts."<sup>83</sup> Consequently, PFS would have to reveal those costs when explaining the "cost-passthrough" provisions of the MSA. To this extent, we disagree with the Board's finding.

But we still find that record evidence supports the Board's findings that a *prospective competitor* could use the estimates to determine the feasibility of constructing an ISFSI less expensively and hence undercut PFS's storage rates.<sup>84</sup> We affirm this portion of the Board's factual finding on grounds of deference and no clear error, and also on the additional ground that, as a matter of law, actual or potential competitive injury need not come from that particular competitor. It may come instead from prospective competitors who may be considering the construction of their own ISFSIs.<sup>85</sup> Any interest the public may have in this kind of cost information is easily outweighed by PFS's competitive interests. As the Board properly noted, Utah and the public have been given access to an "extensive amount of information, including the imposed license conditions[,] . . . the remaining unredacted portions of the evidentiary record[,] . . . the capacity for each of the planned phases of construction [and, most important as to this particular issue,] the general methodologies and assumptions PFS relied upon in determining its cost estimates."<sup>86</sup>

The Board further found that "PFS would suffer competitive harm if competitors, vendors, suppliers, and subcontractors learn which costs will be passed through to PFS customers," and that such categories of passthrough costs therefore constitute commercial or financial information protected under section 2.790(b)(3)(i).<sup>87</sup> The Board relied on a PFS affidavit stating that vendors, suppliers, and contractors would "not be as competitive in the pricing of their own goods or services" if they learned of the relevant categories of passthrough costs.<sup>88</sup> The Board also relied on the affidavit's statement that "competitors could use

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<sup>83</sup> Model Agreement for Storage of Spent Fuel at 35, § 14.2.2, *attached to* Applicant's Motion for Summary Disposition, dated Dec. 4, 2000. *See also* Applicant's Submission of [original] Model Service Agreement, dated Sept. 29, 2000, at 31, § 14.2.2.

<sup>84</sup> March 31st Order, slip op. at 18.

<sup>85</sup> *See* pp. 172-73, *supra*.

<sup>86</sup> March 31st Order, slip op. at 22.

<sup>87</sup> *Id.* at 19-20.

<sup>88</sup> *Id.* at 19.

such information to anticipate how PFS intends to structure its customer service agreements’ and could ‘offer potential customers identical or more competitive terms.’<sup>89</sup> We conclude that the Board’s finding is supported by record evidence and not clearly erroneous, and further that PFS’s interest outweighs that of the public.<sup>90</sup> We therefore affirm the Board’s ruling.

We also find no clear error in the Board’s fourth set of factual findings, concerning the maximum available onsite property insurance and PFS’s response to future premium increases for that insurance coverage.<sup>91</sup> The Board’s findings are supported by a PFS affidavit stating that competitors could use this information to either match or distinguish themselves from PFS’s position when negotiating with potential customers.<sup>92</sup> We therefore find record support for, and no clear error in, the Board’s finding of potential injury from competitors’ knowledge of this information, and we defer to the Board’s finding. We also agree with the Board that PFS’s interest in confidentiality outweighs the countervailing public’s interest.<sup>93</sup>

In addition to evidentiary and decisional discussions of the four topics discussed above, the Board also found that decisional discussions of four additional subjects should be exempt from disclosure: cost estimates, host facility cost information, current and obsolete funding plan information, and other MSA terms and conditions.

The Board declined to redact from its earlier orders information regarding the following cost estimates for a 4000-cask facility: total construction costs, total operating and maintenance costs over 40 years, total cask costs, and total canister costs.<sup>94</sup> The Board reasoned that PFS had not kept this information confidential, nor had PFS customarily held this kind of information in confidence, nor was this information unavailable from public sources.<sup>95</sup> The record supports the Board’s findings. Even though this kind of information might well have otherwise qualified for confidential treatment, we agree with the Board that PFS’s own actions and practice (publishing this or similar information on its Web site

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<sup>89</sup> *Id.* See also PFS’s Motion for Stay at 6.

<sup>90</sup> March 31st Order, slip op. at 22.

<sup>91</sup> *Id.* at 20-21.

<sup>92</sup> *Id.* at 20.

<sup>93</sup> *Id.* at 22, 33-34. By contrast, the Board could find no record support for withholding information as to the course PFS would take if its intended insurance level cannot be maintained at the anticipated annual premium of x x x x x x x x x x (*id.* at 20-21, 32). But as PFS does not challenge this ruling on appeal, we do not need to reach it. In any event, our own review of the record likewise reveals no such support. See PFS’s Justification for Withholding, at unnumbered pages 4-5; PFS’s Reply to Utah’s Objections, dated July 24, 2003, at 9.

<sup>94</sup> March 31st Order, slip op. at 26-27.

<sup>95</sup> *Id.* at 26-27.

or newsletters) render redaction inappropriate here under the five-factor test of section 2.790(b)(4).

Next, the Board agreed to redact certain host-facility cost information from its prior orders. It ruled that PFS's host payments to the Skull Valley Band could, if released, be used against it in negotiations for service contracts and in the competition for customers. Unlike the 4000-cask facility costs discussed immediately above, information about PFS's host payments to the Skull Valley Band has never entered the public domain.<sup>96</sup> We concur in the Board's decision to redact this information, and also its conclusion that PFS's interest in confidentiality outweighs the public's interest in disclosure.

By contrast, the Board declined to redact certain calculations by Utah's expert indicating PFS's underpayment of its host payments to Tooele County. The Board could find no evidentiary references to, or justifications for, PFS's redaction request.<sup>97</sup> We might have approved a redaction of this information had PFS provided a proper basis in the record below (as it did provide regarding its information on host-facility payments to the Skull Valley Band). Nonetheless, given the absence of such record support, we must concur with the Board's finding.

The Board further found, regarding the current funding plan for the PFS facility, that PFS would suffer competitive harm if vendors, suppliers, and subcontractors learned of PFS's intention, under the MSA, to x x x x x x x x pass all its operating and maintenance costs along to its customers.<sup>98</sup> PFS asserts that vendors', suppliers', or contractors' knowledge of the MSA's passthrough provision could easily result in their raising their prices, to PFS's disadvantage.<sup>99</sup> Although Utah raises contrary arguments specific to *individual* vendors and subcontractors,<sup>100</sup> we can resolve this issue without getting down to that level of detail.<sup>101</sup> Logic suggests to us that vendors and subcontractors will seek the highest

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<sup>96</sup> *Id.* at 27.

<sup>97</sup> *Id.* at 28.

<sup>98</sup> *Id.* at 31.

<sup>99</sup> *See, e.g.*, PFS's Reply Brief, dated July 16, 2004, at 3. As noted *supra* at pages 170-71, PFS makes a related argument regarding references to our *Monticello* decision.

<sup>100</sup> *See, e.g.*, Utah's Petition for Review, dated April 15, 2004, at 6-8 (regarding rail carriers and cask vendors); Utah's Reply to PFS's Petition for Review, dated April 26, 2004, at 7 n.16 (regarding same).

<sup>101</sup> We, like the federal courts, need not "engage in a sophisticated economic analysis of the substantial competitive harm . . . that might result from disclosure." *GC Micro Corp.*, 33 F.3d at 1115. *Accord Utah*, 256 F.3d at 970; *Public Citizen Health Research Group v. Food and Drug Admin.*, 704 F.2d at 1291. *See generally General Elec. Co. v. NRC*, 750 F.2d at 1403 (a proceeding on a request for information is not required to be as elaborate as a licensing or other formal proceeding'). *Cf. id.* (an NRC licensee need not make its case of substantial competitive harm with anything like the rigor that would be demanded of a plaintiff in an antitrust suit').

prices they can get, *regardless* of the nature of the purchaser's or contractor's funding arrangements. Vendors presumably would assume that PFS intends to pass its costs on to its customers. It is not self-evident that revealing this aspect of PFS's plan would compromise PFS's commercial interests or bargaining position.

In any event, neither the Board nor PFS has offered a persuasive explanation as to how public knowledge of the cost-passthrough nature of PFS's funding plan would somehow place PFS in a more disadvantageous position vis-a-vis its vendors, suppliers, and subcontractors than PFS would otherwise have been placed. Conclusory assertions in PFS's declarations and affidavits do not suffice. We therefore reverse the Board's refusal to release any discussion of PFS's intent to use a 100% cost-passthrough financing arrangement.<sup>102</sup>

We do not, however, reach a similar conclusion regarding PFS's earlier, now-abandoned funding plan (which is premised on a financial arrangement different from the 100% cost-passthrough arrangement that supports PFS's current plan). Utah asserts that out-of-date information regarding this earlier plan should, due to its obsolescence, no longer be protected.<sup>103</sup> But even out-of-date financial information could arguably give competitors, vendors, suppliers, and subcontractors useful information that they would use to PFS's disadvantage in future negotiations.<sup>104</sup> Conversely, such information will be of no use to the public in understanding whether PFS's *entirely different* funding plan satisfies our "financial assurance" requirements. The balance between these interests strongly favors those of PFS. We therefore affirm the Board's refusal to release PFS's older funding plan.<sup>105</sup>

Finally, the Board found that PFS could suffer competitive harm from the release of the terms and conditions of its MSA other than the terms regarding x x x x x passthrough costs.<sup>106</sup> These "other" terms concern such matters as the service agreement execution/commitment fees,<sup>107</sup> the per kilogram payments for

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<sup>102</sup> March 31st Order, slip op. at 31. For the same reasons, we affirm the Board's decision to release the various references in its orders to our *Monticello* decision (*id.* at 29-31).

<sup>103</sup> Utah's Petition for Review, dated April 15, 2004, at 10 & n.22. The out-of-date financial information was associated with a funding plan on which PFS was relying prior to its production of the current MSA cost-passthrough plan on Sept. 29, 2000. *See* Utah's Response to PFS's Petition for Review at 3.

<sup>104</sup> *See, e.g., Timken Co. v. U.S. Customs Service*, 531 F. Supp. 194, 200-01 (D.D.C. 1981).

<sup>105</sup> *See* Utah's Petition for Review, dated April 15, 2004, at 10 n.22, *citing* Financial Assurance Order ¶¶ 3.46, 3.47, 3.72, 3.78, 3.81, 4.49, & March 31st Order, App. P, at 2-3, 9-10, 11-12 (in turn referring to MSA Order, slip op. at 11, 12, 46-47, 61).

<sup>106</sup> March 31st Order, slip op. at 33. On July 3, 2003, PFS filed with the Board a copy of the MSA Order on which PFS had flagged with the signal "[6]" all passages containing these "other" terms.

<sup>107</sup> *See, e.g., MSA Order*, slip op. at 13, 15, 20, 38.



Phase I of the project,<sup>108</sup> x x x x x x,<sup>109</sup> and the amount of cash on hand prior to receiving spent fuel.<sup>110</sup> In support of its redaction ruling, the Board cited PFS's arguments that competitors and potential customers would have a significant competitive advantage during negotiations, and that potential competitors would likewise possess advantageous information.<sup>111</sup> For the reasons set forth *supra* at pages 174-75, we disagree with the "potential customers" portion of this finding (customers perform will know the terms of the MSAs), but we uphold the "competitor" portion.

### 3. *Balancing of Interests*

We have conducted, *supra*, a balancing test for each kind of information that initially qualified as "confidential" under section 2.790(b)(4). We nonetheless believe further discussion of the balancing test is appropriate — given the general nature of Utah's "balancing" argument, and particularly given the absence of prior Commission guidance on this topic.

Once we have determined that much of a party's financial information is in fact proprietary, our regulations call on us to consider "whether the right of the public to be fully apprised as to the basis for and the effects of the proposed action outweighs the demonstrated concern for protection of a competitive position."<sup>112</sup> Utah argues generally that all the Board's redactions (as well as PFS's proposed additional redactions) would leave the public blind as to PFS's demonstrated compliance with 10 C.F.R. § 72.22(e) (financial qualifications) and the Board's and Commission's responses to Utah's substantive arguments that PFS is financially unqualified to own and operate the proposed ISFSI.<sup>113</sup> This result, according to Utah, undercuts its ability to represent its citizens and silences any public monitoring of "NRC's compliance with its regulations."<sup>114</sup>

We have stated that "[t]he public interest to be weighed in this balance has been narrowly defined as an interest in determining the bases for and results of agency action (i.e., determining what the government is up to), and does not include incidental benefits from disclosure that may be enjoyed by members of

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<sup>108</sup> See, e.g., *id.* at 17, 19, 30, 35, 41.

<sup>109</sup> See, e.g., *id.* at 45-46.

<sup>110</sup> See, e.g., *id.* at 28.

<sup>111</sup> March 31st Order, slip op. at 33.

<sup>112</sup> 10 C.F.R. § 2.790(b)(5).

<sup>113</sup> Utah's Brief on Financial Information at 12-13.

<sup>114</sup> *Id.* at 13. See also Utah's Response to PFS's Motion for Stay at 6 ("misinformation remains in the public domain" and "the State will be harmed to the extent it must remain mute to PFS's public statements").

the public.”<sup>115</sup> Utah’s general argument is essentially a restatement of this ruling. We conclude that, as a general matter, the balance favors withholding proprietary information regarding the kinds of financial issues discussed above. Today, we have ruled consistent with this principle, with exceptions as specifically noted *supra*. During the half century in which we have been exercising this balancing test,<sup>116</sup> our weighing has been and continues to be informed by the “strong legislative policy against disclosure of proprietary information.”<sup>117</sup> We also give considerable weight to the Staff’s pro-redaction position which, in this proceeding, largely tracks that of PFS.<sup>118</sup>

It is important for nuclear industry participants to feel free to innovate (as PFS is doing in its ISFSI project), with no fear that the proprietary data associated with their innovations will casually be released to the public.<sup>119</sup> Indeed, Congress’s purpose in enacting section 103(b)(3) of the Atomic Energy Act<sup>120</sup> was “to protect the property right, the commercial right, which a licensee as a developer of a new procedure, new idea, should properly have.”<sup>121</sup> Finally, we observe that a great deal of safety- and environmental-related information from the record is already in the public domain. We believe that public release of the additional proprietary financial information we are withholding here would add little to the public’s understanding as to the overall safety of the PFS facility — particularly given that

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<sup>115</sup> Final Rule: “Availability of Official Records,” 68 Fed. Reg. 18,836, 18,837 (Apr. 17, 2003) (internal quotation marks omitted). Likewise, under FOIA case law, the first of these factors is *the only* public interest that may be weighed in the balance. *Public Citizen Health Research Group v. Food & Drug Admin.*, 185 F.3d 898, 904 (D.C. Cir. 1999); *Gilmore v. United States Dep’t of Energy*, 4 F. Supp. 2d 912, 922 (N.D. Cal. 1998).

<sup>116</sup> *Westinghouse Electric Corp. v. NRC*, 555 F.2d 82, 87, 88 (3rd Cir. 1977).

<sup>117</sup> *Id.*, 555 F.2d at 87, 90-91. *See also id.* at 92 (referring to the “longstanding congressional policy which disfavors disclosure of proprietary information”); *Point Beach*, LBP-82-42, 15 NRC at 1315.

<sup>118</sup> *See Northern States Power Co.* (Monticello Nuclear Generating Plant, Unit 1), ALAB-10, 4 AEC 390, 399, *aff’d*, 4 AEC 409 (Commission 1970); *Point Beach*, LBP-82-42, 15 NRC at 1319.

<sup>119</sup> *See generally Westinghouse Elec.*, 555 F.2d 82; *Point Beach*, LBP-82-42, 15 NRC 1307 (1982).

<sup>120</sup> This section (42 U.S.C. § 2133(b)(3)) provides that

The Commission shall issue . . . licenses . . . to persons applying therefor . . . who agree to make available to the Commission such technical information and data concerning activities under such licenses as the Commission may determine necessary to promote the common defense and security and to protect the health and safety of the public. All such information may be used by the Commission only for the purposes of the common defense and security and to protect the health and safety of the public.

<sup>121</sup> *General Elec. Co. v. NRC*, 750 F.2d at 1401, quoting *Hearings on S. 3323 and H.R. 8862 To Amend the Atomic Energy Act of 1946 Before the Joint Comm. on Atomic Energy*, 83d Cong. 925 (1954) (remarks of Congressman Cole, the committee’s chairman).

the financial information is of only derivative significance to environmental and safety issues.<sup>122</sup>

In short, even with the redaction of the additional material as required by this Order, we would still concur in the Board assessment that Utah's position

fails to give sufficient weight to the extensive amount of information that will be made available to the public, including the imposed license conditions and remaining unredacted portions of the evidentiary record. PFS has agreed to disclose the capacity for each of the planned phases of construction, which gives the public a fairly precise idea of the magnitude of the proposed facility. In addition the public record will include the general methodologies and assumptions PFS relied upon in determining its cost estimates. The redacted record thus will provide the public with sufficient balanced information to know the basis for our decision.<sup>123</sup>

#### **D. Additional Requests for Redaction**

PFS asserts that the five pieces of additional information for which it now, for the first time, seeks proprietary treatment are similar to proprietary information for which it has already sought redaction. PFS explains that it had inadvertently overlooked the additional information on x x x x x and passthrough costs until preparing its instant petition for review. PFS directs our attention to the large volume of material it needed to review and also to its good-faith effort to apply the redaction criteria narrowly to that material.<sup>124</sup>

Before we reach the merits of PFS's request for additional redactions, we must first consider the procedural question whether PFS made this request before the proper forum. PFS acknowledges that, ordinarily, it would raise such a supplemental request initially with the Board rather than with us. However, given that the Commission currently has before it numerous other related issues, PFS asserts that administrative efficiency justifies our consideration of PFS's supplemental request. We agree, and will consider PFS's request.<sup>125</sup>

For this agency's adjudicatory system to work as designed, the parties must follow the Commission's procedural rules. One of those rules provides that "[a]

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<sup>122</sup> See Final Rule: "Elimination of Review of Financial Qualifications of Electric Utilities in Operating License Review and Hearings for Nuclear Power Plants," 49 Fed. Reg. 35,747, 35,749 (Sept. 12, 1984); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-20, 30 NRC 231, 236 n.8, 244 (1989); *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center) CLI-97-15, 46 NRC 294, 306, 308 (1997).

<sup>123</sup> March 31st Order, slip op. at 22.

<sup>124</sup> Applicant's Supplemental Brief at 9-10.

<sup>125</sup> *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-939, 32 NRC 165, 167 n.3 (1990). See generally *Baltimore Gas and Electric Co. v. Natural Resources Defense Council*, 462 U.S. 87, 101 (1983).

petition for review will not be granted to the extent that it relies on matters that could have been but were not raised before the presiding officer.”<sup>126</sup> Of the five pieces of information at issue, PFS asked the Board to provide protected status for only one, regarding cost categories.<sup>127</sup> The Board did not rule on this request, but we conclude that the Board’s rationale for approving the redaction of other cost category information (which we affirm today at p. 175-76, *supra*) is equally applicable to this similar piece of information.

As for the remaining four pieces of information, PFS has shown no good cause for failing to seek the Board’s protection. Hence, we do not order this redaction. PFS’s arguments (large volume of material, narrow application of redaction criteria) are so broad as to justify the late filing of redaction requests in just about any NRC adjudication involving large numbers of documents. For reasons of judicial efficiency, we decline to open that Pandora’s Box. We find, therefore, that PFS has waived the redaction issue as to those four pieces of information.

#### **E. Information Contained in CLI-04-10 and CLI-04-27**

On March 24, 2004, the Commission issued CLI-04-10 (61 NRC at 131) granting PFS’s petition for review of the Board’s January 5th Order and denying Utah’s petition for review of portions of the same order as well as of two May 27, 2003 Board orders (the Financial Assurance Order and the Decommissioning Order). The issues on which we granted review (and sought appellate briefs) were whether PFS must have service contracts in place to cover operating and maintenance costs for a specific volume of spent fuel (1000 casks) prior to beginning operations and, if so, whether those contracts must be in a specific dollar amount in order to satisfy License Condition 17-2 (also cited as LC-2) approved in *PFS*, CLI-00-13. Because our discussion in CLI-04-10 regarding PFS’s financial plan contained proprietary information, we gave the parties the opportunity to designate appropriate passages for redaction.

In response, PFS submitted proposed redactions.<sup>128</sup> Utah then objected to PFS’s proposals on the grounds that the redactions related to published NRC decisional material — the *Monticello* decision — and destroyed the structure, accuracy, substance, and context of evolving agency precedent on financial assurance case law. Utah contended that PFS should not be allowed to rely on *Monticello* to support the “cost-plus” (i.e., 100% cost-passthrough, plus profit) basis of its

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<sup>126</sup> 10 C.F.R. § 2.786(b)(5), *recodified at* 10 C.F.R. § 2.341(b)(5), effective February 13, 2004 (Final Rule: “Changes to Adjudicatory Process,” 69 Fed. Reg. 2182, 2219, 2251 (Jan. 14, 2004)).

<sup>127</sup> See Staff’s Response to Applicant’s Petition for Review, dated April 26, 2004, at 9 n.17.

<sup>128</sup> Applicant’s Designation of Proposed Proprietary Redactions to CLI-04-10, dated April 13, 2004.

license application, yet to seek simultaneously the redaction of references to *Monticello*-based “cost-plus” arguments in CLI-04-10. Also, according to Utah, CLI-04-10 may have generic implications for other proceedings dealing with financial qualifications issues. Utah grounds its legal arguments in 10 C.F.R. § 2.790 and FOIA’s Exemption 4, discussed *supra*.<sup>129</sup>

We have already decided, *supra*, not to redact the Board Orders’ citations to *Monticello*. Those rulings control as to CLI-04-10 as well. Also, we recently issued CLI-04-27 (addressing the merits of the parties’ “financial assurance” arguments) — but after the parties had filed their appellate briefs regarding redaction. We nonetheless apply our rulings today to CLI-04-27 (61 NRC 145), for the logic of today’s rulings applies as much to CLI-04-27 as to CLI-04-10.

#### **F. Future “Redaction” Proceedings**

We issue the following instructions to PFS and the Board regarding redactions to the Board’s five orders of May 27, 2003, January 5, 2004, and March 31, 2004, and also any briefs or evidentiary material in the record the disclosure of which has been contested in this appellate portion of the instant proceeding. PFS shall, within **60** days, provide the Board with redacted versions consistent with the rulings in the instant order.<sup>130</sup> We consider the Board better positioned than we are to make this initial review of PFS’s proposed redactions of Board material — given the factual nature of the redaction issues,<sup>131</sup> the Board’s considerably greater familiarity with the adjudicatory record, and the Board’s own authorship of the five orders.<sup>132</sup>

As soon as possible after receiving PFS’s proposed redactions, the Board shall review the redacted versions of those documents to confirm their consistency with the rulings in the instant order. If the Board is satisfied, it shall issue a notice authorizing the Commission’s Office of the Secretary (SECY) to release such versions to the public immediately. If, however, the Board is not satisfied, then it

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<sup>129</sup> Utah’s Response to Applicant’s Proposed Redactions to CLI-04-10, dated April 20, 2004.

<sup>130</sup> See generally *Point Beach*, LBP-82-42, 15 NRC at 1333 (“We shall call on Westinghouse to identify the text passages containing . . . proprietary details and to delete only those details”); *Wisconsin Electric Power Co.* (Point Beach Nuclear Plant, Units 1 and 2), LBP-81-62, 14 NRC 1747, 1765 (1981) (after ordering the public release of certain information, the Board stated that “[w]e consider it appropriate to direct Westinghouse to submit to us a new non-proprietary version of its filing which conforms to this ruling”); *McCurdy v. Wedgewood Capital Management Co.*, 1998 WL 964185 (E.D. Pa. Nov. 16, 1998) (“because both parties suggest that the Court review any contested documents *in camera*, . . . [d]efendant will be ordered to produce one set of the “redacted documents” . . . in our chambers . . . for *in camera* inspection”).

<sup>131</sup> See generally *Point Beach*, LBP-82-42, 15 NRC at 1318, 1330.

<sup>132</sup> See *Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Unit 3), CLI-00-25, 52 NRC 355, 356 (2000).

shall issue an order setting forth its modifications to PFS's proposed redactions, and shall attach what it considers to be appropriately redacted versions of the documents at issue. The parties may file petitions for review of such a notice or order within **15** days of its service. The filing of a petition will automatically stay the public release of the documents at issue in that petition, pending a Commission ruling. If no petitions are filed within the **15**-day period, SECY shall immediately release to the public the Board's redacted versions of the documents.<sup>133</sup>

We likewise instruct PFS to provide us within **30** days with redacted versions of the instant order, CLI-04-10, and CLI-04-27, consistent with the rulings in the instant order. If we are satisfied, we shall issue a notice authorizing SECY to release such versions to the public immediately. If, however, we are not satisfied, then we shall issue an order setting forth our modifications to PFS's proposed redactions, and we shall attach what we consider to be appropriately redacted versions of the three Commission orders. SECY shall then immediately release those versions of the three orders to the public.

#### **IV. ORDER**

1. The Commission *affirms in part and reverses in part* the March 31st Order's rulings regarding disclosure of the information from our *Monticello* decision, PFS's MSA, and PFS's settlement with Castle Rock.

2. The Commission further *directs* the Board and parties to follow the procedures set forth in Section F of the instant Memorandum and Order.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 5th day January 2005.

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<sup>133</sup>This procedural approach is similar to the one taken by the Licensing Board in *Point Beach*, LBP-82-42, 15 NRC at 1337-38.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**E. Roy Hawkens**, Chairman  
**Alan S. Rosenthal**  
**Dr. Peter S. Lam**

**In the Matter of**

**Docket Nos. 30-5980-MLA  
30-5982-MLA  
30-5980-EA  
30-5982-EA  
(consolidated)  
(ASLBP Nos. 04-833-07-MLA,  
05-835-01-EA)  
(Materials License  
Amendment and  
Materials License  
Suspension)**

**SAFETY LIGHT CORPORATION  
(Bloomsburg, Pennsylvania Site)**

**March 4, 2005**

In this consolidated proceeding — which involved challenges by Safety Light to (1) the Staff's enforcement order that suspended Safety Light's materials licenses, and (2) the Staff's denial of Safety Light's application to renew its materials licenses — the Licensing Board granted the parties' joint motion to dismiss the enforcement action as moot.

## **RULES OF PRACTICE: TERMINATION OF ENFORCEMENT PROCEEDING AS MOOT**

In an enforcement proceeding involving a licensee's challenge to a suspension order, the Licensing Board is obliged to dismiss the proceeding as moot where the Staff has unconditionally withdrawn the challenged order and given assurance that another order of this type is not fairly "capable of repetition." Under such circumstances, a live controversy no longer exists. *See Puerto Rico Electric Power Authority* (North Coast Nuclear Plant, Unit 1), ALAB-605, 12 NRC 153, 154 (1980) (adjudicatory tribunals have "inherent authority . . . to dismiss those matters placed before them which have been mooted by supervening developments").

### **ORDER**

#### **(Order Terminating Enforcement Proceeding as Moot)**

On March 3, 2005, this Board issued an order directing Safety Light Corporation and the NRC Staff to show cause (if any) why the enforcement portion (Docket Nos. 30-5980-EA and 30-5982-EA (ASLBP No. 05-835-01-EA)) of this consolidated proceeding should not be dismissed as moot.<sup>1</sup>

Safety Light and the Staff promptly responded with a joint motion seeking termination of the enforcement proceeding on grounds of mootness. *See* Joint Motion for Termination of Enforcement Proceeding (Mar. 3, 2005) [hereinafter Joint Motion]. In their motion, the parties state that the "issue in controversy in the enforcement proceeding — whether the Suspension Order should be sustained — is now moot," because the Commission lifted the immediate effectiveness of that order on February 22, 2005 (CLI-05-7, 61 NRC 69 (2005)), and the Staff withdrew the order in its entirety on February 25, 2005. *See* Joint Motion at 2. The parties further represent that there is no reasonable likelihood that this controversy will be resurrected (thus implicating the "capable of repetition, yet evading review" exception to the mootness doctrine), because the Staff's withdrawal of the suspension order was "without condition." *Id.* at 2 n.2. The

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<sup>1</sup> The enforcement portion of this proceeding arises from Safety Light's challenge to a Staff order of December 10, 2004, that suspended, effective immediately, Safety Light's two materials licenses (Docket Nos. 30-5980-EA and 30-5982-EA (ASLBP No. 05-835-01-EA)). The other portion of this proceeding involves Safety Light's challenge to the Staff's December 10, 2004 denial of its license-renewal request (Docket Nos. 30-5980-MLA and 30-5982-MLA (ASLBP No. 04-833-07-MLA)). This Board consolidated these challenges on January 27, 2005. On March 2, 2005, this Board granted the parties' joint motion to hold the license-renewal proceeding in abeyance for a period of 40 days to allow the parties to pursue settlement negotiations.



parties therefore ask this Board to “issue an order terminating [as moot] the enforcement portion of the above-captioned consolidated proceedings.” *Id.* at 2.

We *grant* the parties’ request to terminate the enforcement portion of this consolidated proceeding. Given the Staff’s unconditional withdrawal of the suspension order, coupled with its assurance that “the issuance of another Suspension Order grounded on violations of those same license conditions is not fairly ‘capable of repetition’ ” (Joint Motion at 2 n.2), the enforcement proceeding in Docket Nos. 30-5980-EA and 30-5982-EA (ASLBP No. 05-835-01-EA) no longer presents a live controversy and must, therefore, be *dismissed as moot*.<sup>2</sup>

It is so ORDERED.

FOR THE ATOMIC SAFETY AND  
LICENSING BOARD<sup>3</sup>

E. Roy Hawkens, Chairman  
ADMINISTRATIVE JUDGE

Alan S. Rosenthal  
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
March 4, 2005

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<sup>2</sup> *Puerto Rico Electric Power Authority* (North Coast Nuclear Plant, Unit 1), ALAB-605, 12 NRC 153, 154 (1980) (adjudicatory tribunals have “inherent authority . . . to dismiss those matters placed before them which have been mooted by supervening developments”).

<sup>3</sup> Copies of this Order were sent this date by Internet e-mail to counsel for (1) Safety Light Corporation, (2) the Pennsylvania Department of Environmental Protection, and (3) the NRC Staff.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD PANEL**

**Before the Chief Administrative Judge:**

**G. Paul Bollwerk, III**

**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)**

**In the Matter of**

**Docket No. 52-008-ESP  
(ASLBP No. 04-822-02-ESP)**

**DOMINION NUCLEAR NORTH ANNA, LLC  
(Early Site Permit for North Anna  
ESP Site)**

**In the Matter of**

**Docket No. 52-009-ESP  
(ASLBP No. 04-823-03-ESP)**

**SYSTEM ENERGY RESOURCES, INC.  
(Early Site Permit for Grand Gulf  
ESP Site)**

**In the Matter of**

**Docket No. 70-3103-ML  
(ASLBP No. 04-826-01-ML)**

**LOUISIANA ENERGY SERVICES, L.P.  
(National Enrichment Facility)**

**March 18, 2005**

Acting on behalf of the Licensing Boards in four different proceedings, the *Clinton*, *North Anna*, and *Grand Gulf* early site permit (ESP) proceedings and

the *Louisiana Energy Services, L.P.* uranium enrichment facility proceeding, the Chief Administrative Judge certifies common and novel questions related to the proper conduct of mandatory hearings to the Commission for its consideration and resolution.

## **RULES OF PRACTICE: CERTIFICATION OF ISSUES TO COMMISSION**

Following consultation with the members of their Boards and with each other, the Chairmen of four Licensing Boards determined, pursuant to 10 C.F.R. §§ 2.319(*l*), 2.323(f), that the proceedings involve certain common and novel questions relative to the proper conduct of mandatory hearings that merit Commission review at the earliest opportunity. Accordingly, pursuant to 10 C.F.R. § 2.341(f), the Chief Administrative Judge certifies those questions to the Commission for its consideration.

### **MEMORANDUM (Certifying Questions Regarding Mandatory Hearing Procedures)**

Four different Licensing Boards currently have before them proceedings in which the agency's initial public notice mandated that the Boards hold a hearing and make certain mandatory findings.<sup>1</sup> These will be the first mandatory hearings held by a Licensing Board in more than two decades. Three of these proceedings — the *Clinton* and *North Anna* 10 C.F.R. Part 52 early site permit (ESP) proceedings and the *Louisiana Energy Services, L.P.* (LES) 10 C.F.R. Part 70 uranium enrichment facility proceeding — are contested (i.e., have admissible contentions that are being litigated, *see* 10 C.F.R. § 2.4 (definition of “contested proceeding”)) while one — the *Grand Gulf* ESP proceeding — is uncontested (i.e., had no admissible contentions). After consultation with the members of the four Boards, the Chairmen of these Boards have conferred and determined that, pursuant to 10 C.F.R. §§ 2.319(*l*), 2.323(f), these four proceedings involve certain common and novel questions relative to the proper conduct of the mandatory hearings that merit Commission review at the earliest opportunity. Accordingly, pursuant to 10 C.F.R. § 2.341(f), the Chief Administrative Judge certifies these

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<sup>1</sup> *See Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-3, 59 NRC 10, 12-13 (2004); *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), LBP-04-17, 60 NRC 229, 250 n.10 (2004); *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 NRC 253, 274 n.10 (2004); *System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), LBP-04-19, 60 NRC 277, 298 (2004).

questions, which are set forth in more detail in section II below, for authoritative resolution by the Commission.

## I. OVERVIEW

### A. Statutory and Regulatory Provisions

The statutory genesis of the “mandatory” hearing that is applicable in all these proceedings is the second sentence of section 189a(1)(A) of the Atomic Energy Act of 1954 (AEA), 42 U.S.C. § 2239(a)(1)(A), providing that “[t]he Commission shall hold a hearing after thirty days’ notice and publication once in the Federal Register, on each application . . . for a construction permit for a [production or utilization] facility . . .” To implement this mandatory hearing requirement, which is applicable to both the ESP and the *LES* proceedings,<sup>2</sup> the Commission has promulgated a regulatory provision, 10 C.F.R. § 2.104(b), regarding the content of a notice of hearing. Section 2.104(b) provides as follows:

1. For an *uncontested* proceeding, “[w]ithout conducting a de novo evaluation of the application,” the Board “will determine” if:

- (1) “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” whether:
  - (i) “in accordance with the provisions of § 50.35(a)” whether:
    - (a) “[t]he 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) “[s]uch 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) “[s]afety 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”;

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<sup>2</sup> See 10 C.F.R. §§ 52.21, 70.23a, 70.31(e).

- (d) “[o]n the basis of the foregoing [(i.e., (1)(i)(a)-(c) above)], 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 [10 C.F.R.], the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public”;
- (ii) “the applicant is technically qualified to design and construct the proposed facility”;
- (iii) “the applicant is financially qualified to design and construct the proposed facility”; and
- (2) “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 . . . a negative finding” on 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”; and
- (3) “the review conducted by the Commission pursuant to the National Environmental Policy Act (NEPA) has been adequate.”

10 C.F.R. § 2.104(b)(2).

2. For a *contested* proceeding, the Board “will consider” — albeit absent the uncontested proceeding directives that it do so

- (1) “without conducting a de novo evaluation of the application”; and
- (2) based on 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” — items (1)(i)(a), (b), (c), and (d), (1)(ii), and (1)(iii) above, as well as whether:
  - (iv) “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) “in accordance with the requirements of subpart A of part 51 of [10 C.F.R.], the construction permit should be issued as proposed.”

10 C.F.R. § 2.104(b)(1).

3. Regardless of whether the proceeding is *contested or uncontested*, in accordance with Part 51,<sup>3</sup> the Board will make the following three basic or “baseline” NEPA findings:

- (i) “[d]etermine whether the requirements of section 102(2)(A), (C) and (E) of [NEPA] and subpart A of [10 C.F.R. Part 51] have been complied with in the proceeding”;
- (ii) “[i]ndependently consider the final balance among the conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken”; and
- (iii) “[d]etermine whether the construction permit should be issued, denied, or appropriately conditioned to protect environmental values.”

10 C.F.R. § 2.104(b)(3).

Additionally, relative to the general question of the scope of mandatory hearings, it previously was the Commission’s established policy that

[a]s to matters pertaining to radiological health and safety which are not in controversy, boards are neither required nor expected to duplicate the review already performed by the staff and [Advisory Committee on Reactor Safeguards (ACRS)], and they are authorized to rely upon the testimony of the staff, the applicant, and the conclusions of the ACRS, which are not controverted by any party.

That policy, which was codified at 10 C.F.R. Part 2, App. A, § V(f)(1) (contested proceeding), *see also id.* § V(f)(2) (uncontested proceeding), was deleted when Part 2 was revised in January 2004. *See* 69 Fed. Reg. 2182, 2274 (Jan. 14, 2004).

## **B. Hearing Notices in ESP and LES Proceedings**

As its reference to section 50.35(a) makes apparent, the focus of the existing section 2.104 is power reactor proceedings, in particular construction permit proceedings. While the *LES* and *ESP* proceedings involve construction authorization, they differ from the classic reactor construction permit proceeding with respect to the type of facility construction being authorized (i.e., *LES* is a uranium enrichment facility) or the scope of the authorization (i.e., an *ESP* authorizes only site preparation activities, subject to a site redress plan). In its hearing notices, however, the agency set forth instructions regarding the conduct of mandatory hearings that are specific to these two types of proceedings, which we have summarized in the table attached to this Memorandum.

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<sup>3</sup>Specifically, the provision of 10 C.F.R. Part 51 that is implicated is section 51.105(a)(1)-(3).

With respect to AEA safety matters in the contested and uncontested ESP proceedings, the notices label as Safety Issues 1 and 2 what are essentially the elements of section 2.104(b)(1)(i)(d)(2) (10 C.F.R. Part 100 criteria) and section 2.104(b)(1)(iv) that clearly are pertinent to ESP applications.<sup>4</sup> *See, e.g.*, 69 Fed. Reg. 2636, 2636 (Jan. 16, 2004). So too, in its section II.F regarding contested cases, the *LES* notice references the standards in section II.C of the *LES* notice. *See Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-3, 59 NRC 10, 13 (2004). In turn, section II.C of the *LES* notice references the specific AEA safety provisions in Parts 30, 40, and 70 that apply to uranium enrichment facilities. *See id.* at 12. As to NEPA matters, both the ESP and *LES* notices reference what has been referred to above as the three “baseline” NEPA findings that, in accord with 10 C.F.R. § 51.105(a) (1)-(3) (*see also id.* § 2.104(b)(3)), must be made in either a contested or an uncontested proceeding. Additionally, both notices reference the NEPA mandatory hearing findings that are required, depending upon whether a proceeding is contested or uncontested. *See id.* §§ 2.104(b)(1)(v), 51.105(a)(5) (contested proceeding); *id.* §§ 2.104(b)(2)(ii), 51.105(a)(4) (uncontested proceeding).

At the same time, the notices create some uncertainty about the exact scope of the review that is required of licensing boards for mandatory proceedings. For example, 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. *See, e.g.*, 69 Fed. Reg. at 2636. 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, 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.” *Id.*

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<sup>4</sup>Because an ESP is a partial nuclear power plant construction permit, *see* 10 C.F.R. § 52.21, the notices generally follow the requirements of 10 C.F.R. § 2.104(b)(1)-(3) for facility construction permits. At the ESP stage, however, the applicant is not required to know or to specify the type or design of a nuclear reactor to be used at the site, but must provide the parameters of the types of reactor or reactors for which it seeks site approval. *See id.* § 52.17(a)(1). Accordingly, the ESP notices need not provide an outline of a proposed facility design major features or components, safety features or components, and technical qualifications that otherwise would need to be specified for a construction permit application under 10 C.F.R. § 2.104(b)(1)(i)-(iii). *See also id.* § 52.79.

### C. Parties' Suggested Approaches to Conduct of Mandatory Hearings

In an effort to develop a unified approach, each of the Licensing Boards currently involved with mandatory hearings requested that the Applicant and the Staff propose procedures that might be adopted by that Board for the mandatory hearing. The resulting recommendations fall into three distinct categories. 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.<sup>5</sup> 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.<sup>6</sup> 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."<sup>7</sup>

## II. ANALYSIS AND CERTIFIED QUESTIONS

Given the seeming ambiguity between portions of the various notices and the underlying regulations, and the substantial amount of judicial resources necessary to implement a number of the interpretations of the conduct of the mandatory hearings suggested by the parties,<sup>8</sup> acting on behalf of the Licensing

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<sup>5</sup> See Joint Status Report Regarding the Parties' Proposed Discovery Plan and Other Adjudicatory Process Issues (July 29, 2004) at 8-9 [hereinafter *LES* Joint Status Report]. See also the suggestion by the Applicant and Staff in the *North Anna* ESP proceeding that "the Board should . . . [rely] on the testimony of the Staff and the applicant and the conclusions of the ACRS rather than duplicating the NRC Staff's review." Joint Memorandum on the Mandatory Hearing Process (Oct. 8, 2004) at 5 [hereinafter *North Anna* Joint Memorandum].

<sup>6</sup> See, e.g., Joint Response of Exelon Generation Company and the NRC Staff to Licensing Board Request Regarding Mandatory Hearing Procedures for the Clinton Early Site Permit (Sept. 17, 2004) at 3-5 [hereinafter *Clinton* Joint Response].

<sup>7</sup> See *North Anna* Joint Memorandum at 4.

<sup>8</sup> For example, as was noted earlier, in the contested *North Anna* proceeding the Applicant and the Staff suggested that "the Board should . . . [rely] on the testimony of the Staff and the applicant and the conclusions of the ACRS rather than duplicating the NRC Staff's review." *North Anna* Joint Memorandum at 5. Likewise, in *LES*, which is a contested proceeding, the Applicant and the Staff propose to provide the Licensing Board with an executive summary of the key areas of

(Continued)



Boards conducting these four proceedings, I certify the following issues to the Commission. Early determination of these matters will materially advance the orderly disposition of each proceeding.

#### **A. Scope of Licensing Board Review**

As an initial matter, of concern to the current ESP Licensing Boards are those aspects of the ESP mandatory hearing provisions that define the review responsibilities of the presiding officer. Of particular note is the fact that, for the two ESP AEA safety issues and the NEPA issue, the provisions of the ESP notices suggest there is a fundamental difference between a presiding officer's responsibilities in contested proceedings and uncontested proceedings. In uncontested proceedings, relative to these safety and NEPA issues, a presiding officer is to "determine" if "the application and the record contain sufficient information" and whether "the review by the staff is adequate" to support the necessary findings. In contested proceedings, on the other hand, although the presiding officer is directed to "consider" the merits of the two safety issues and the NEPA issue, there is no indication that the presiding officer's task is to be limited to an assessment of the sufficiency of the record or the adequacy of the Staff review.

Besides this difference in wording relative to these reviews, agency regulations employ the term "determine" with regard to both the safety and NEPA reviews by the Board in an uncontested proceeding, *see* 10 C.F.R. § 2.104(b)(2), while utilizing the term "consider" in connection with making such findings in an contested proceeding, albeit without any express direction to make any "determination" based upon that consideration, *see id.* § 2.104(b)(1). In conformity with the general rules of construction for statutory and regulatory provisions, these are different terms and thus should be accorded different meanings, *see Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-5, 39 NRC 54, 73 (1994), but as a practical matter it is not apparent what, if any, distinction was intended to exist between

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review and the Staff findings, with reference to the final SER and EIS, after which the Licensing Board would merely develop questions to be answered by the Applicant and the Staff. *See LES* Joint Status Report at 9. Such a process would require considerably less involvement on the part of the Licensing Board members, and therefore, would require materially different judicial resources than the review apparently being suggested for the uncontested *Grand Gulf* and the contested *Clinton* ESP proceedings. *See Clinton* Joint Response at 3-5.

them as they are used to describe a Board's review responsibilities regarding the two safety issues and the NEPA issue.<sup>9</sup>

Given the potential differences in the scope of Board review for these proceedings that these differences in wording could portend, i.e., the difference between a Board acting as an initial decisionmaker as opposed to being a reviewer of the activities of the Applicant and Staff, I certify to the Commission the question of the scope of the responsibility that the Licensing Boards are to undertake in connection with their findings concerning the two ESP AEA safety issues and the NEPA issue.

### **B. Contested Proceeding Versus Contested Matter**

Additionally, it should be noted that although the regulations refer to contested or uncontested "proceedings," the parties in some of the ESP proceedings have suggested that presiding officers should bifurcate contested proceedings into contested or uncontested "portions." See also CLI-04-3, 59 NRC at 13 (*LES* notice distinguishes between Board findings necessary for admitted contentions and determinations on matters that are not covered by admitted contentions). The plain language of the agency's regulations does not, however, distinguish between the "portions" of a contested proceeding. These readings of the ESP notices could result in significantly different assignments of presiding officer review authority depending on whether the proceeding (as opposed to a portion of the proceeding) is contested or uncontested.

The question of whether a proceeding as a whole should be considered as "contested" or "uncontested," or whether those categorizations instead should be applied to portions of a proceeding, depending on whether or not they encompass matters that were the subject of admitted party contentions, thus is worthy of further explication. I certify that question for Commission consideration.

### **C. De Novo Licensing Board Review of Applications**

Another central concern of the ESP Licensing Boards relative to the review responsibilities of the presiding officer is the difference between the language in the notices for the *LES* and ESP cases relative to whether the Board is to conduct a de novo application evaluation. In the *LES* case, in apparent accord with section 2.104(b)(2), all determinations concerning uncontested AEA safety matters (the

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<sup>9</sup>In this regard, the use of these words in these two provisions can be compared to their use in section 2.104(b)(3), in which there appears to be a comprehensible differentiation between the use of both terms relative to the NEPA "baseline" findings required in either contested or uncontested proceedings.

equivalent of ESP Safety Issue 1 items<sup>10</sup>) and the non-“baseline” NEPA matter are to be made “without conducting a de novo review.” In contrast, in the notices for the ESP proceedings, the phrase “without conducting a de novo review” is absent, suggesting that the presiding officer’s duty is not simply to assess the adequacy of the Staff’s review, but to consider (and/or determine) the merits of any AEA safety and NEPA issues that it unearths following its own de novo review of the application.

Accordingly, in connection with an uncontested ESP proceeding, such as *Grand Gulf*, I certify to the Commission the following question: Should the Licensing Board’s 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?<sup>11</sup>

#### **D. NEPA Requirements**

##### ***1. Scope of Board Review Responsibility Regarding Three NEPA “Baseline” Findings***

Regardless of whether the hearing is contested, the Board in the mandatory hearings for the ESP and *LES* proceedings must make determinations regarding what have been labeled as the three 10 C.F.R. § 51.105(a)(1)-(3) “baseline” NEPA findings. In this regard, although the *North Anna* Applicant and the Staff again take the view, as they did with regard to non-NEPA matters, that the Board should rely upon “the testimony of the Staff and the applicant and the conclusions of the ACRS, rather than duplicating the NRC Staff’s review,”<sup>12</sup> it is not apparent that such a “reviewer” role is the correct approach. In the landmark *Calvert Cliffs* decision,<sup>13</sup> the United States Court of Appeals for the District of Columbia Circuit held that in making its NEPA findings in connection with a power reactor construction permit authorization, a hearing board must “examine the

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<sup>10</sup>In the context of the *LES* proceeding, there does not seem to be an analogue to ESP Safety Issue 2, which concerns the 10 C.F.R. Part 100 siting criteria.

<sup>11</sup>Relative to the term “de novo,” we note that even in instances when such a review is appropriate, we would not interpret this term as requiring that a presiding officer “start from scratch” in reviewing the application. Rather we would assume this means that the presiding officer would be authorized to conduct an application review that is plenary in scope and would aggressively probe the underlying basis for the principal health and safety and NEPA conclusions upon which the application (and the Staff’s application review findings) are footed.

<sup>12</sup>*North Anna* Joint Memorandum at 5.

<sup>13</sup>*Calvert Cliffs’ Coordinating Committee, Inc. v. AEC*, 449 F.2d 1109, 1118 (D.C. Cir. 1971).

[EIS] carefully” to determine whether the Staff review was adequate and “must independently consider the final balance among conflicting factors that is struck in the staff’s recommendation.” It is arguable, therefore, that for those “baseline” NEPA matters that are not the subject of a contested issue, the Licensing Boards must study the relevant parts of the record, such as the Applicant’s environmental report and the Staff’s FEIS, 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.

Accordingly, I certify to the Commission the question of the appropriate scope of review for Licensing Boards in making the three “baseline” NEPA findings required by 10 C.F.R. § 51.105(a)(1)-(3); *see also id.* § 2.104(b)(3).

## **2. Scope of NEPA “Baseline” Finding Three**

As was noted previously, consistent with section 2.104(b)(3)(iii) and the ESP and *LES* hearing notices, one of the determinations the presiding officer must make in both contested and uncontested proceedings is whether the license should be issued, denied, or appropriately conditioned to protect environmental values. The ESP notices declare that this finding is to be made “after considering reasonable alternatives,” a reference that is not included in the *LES* notice. Moreover, section 51.105(a)(1)-(3) seems to further expand on this responsibility to consider reasonable alternatives by stating that the Board must “[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.”<sup>14</sup> *See also* 10 C.F.R. § 70.23(a)(7) (enrichment facility construction and operation license cannot be issued until Director of the Office of Nuclear Materials Safety and Safeguards concludes “after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values.”)

Therefore, I also certify to the Commission the following questions: (1) was the failure to include the phrase “after considering reasonable alternatives” in the *LES* notice intended to create a distinction between the responsibilities of the *LES*

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<sup>14</sup>In this regard, however, we note that 10 C.F.R. § 52.18 states that in the ESP context the draft and final EIS “need not include an assessment of the benefits (for example, need for power) of the proposed action, but must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed.”

and the ESP Licensing Boards with regard to their findings on NEPA “baseline” issue three; and (2) was the failure to include the additional wording of section 51.105(a)(3) in both the ESP and *LES* notices intended to narrow further the scope of review required to be undertaken by the Licensing Boards in the mandatory hearings in these proceedings?

### III. CONCLUSION

Because the manner in which the Licensing Boards address these upcoming mandatory hearings likely will have a large impact upon Atomic Safety and Licensing Board Panel scheduling, staffing, and resource allocation,<sup>15</sup> on behalf of the Licensing Boards in the ESP and *LES* proceedings,<sup>16</sup> I respectfully request the Commission’s prompt guidance on the certified questions specified in section II, above.

FOR THE ATOMIC SAFETY AND  
LICENSING BOARD PANEL<sup>17</sup>

G. Paul Bollwerk, III  
CHIEF ADMINISTRATIVE JUDGE

Rockville, Maryland  
March 18, 2005

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<sup>15</sup> For example, we 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). Thus, unless some more summary form of review is undertaken, the three ESP cases should be expected to expend a total somewhere in the neighborhood of 1.5 person-years of work on the mandatory hearing portion of those proceedings. In addition, we note that this work must be performed in large measure by the technical members of each Board, further concentrating the workload.

<sup>16</sup> Additionally, the Commission responses to these questions could impact the conduct of future hearings regarding the application by United States Enrichment Corporation to construct and operate a uranium enrichment facility, *see* 69 Fed. Reg. 61,411, 61,411-12 (Oct. 18, 2004); and the possible Department of Energy application for authorization to construct a high-level waste geologic repository at Yucca Mountain, Nevada, *see* 10 C.F.R. § 51.109(e).

<sup>17</sup> Copies of this Memorandum were sent this date by Internet e-mail transmission to counsel or the representatives for the parties in (1) the *Clinton, North Anna*, and *Grand Gulf* ESP cases; and (2) the *LES* proceeding.

## ATTACHMENT

### Comparison of Notice Provisions Regarding Mandatory Hearing Determinations for Early Site Permit (ESP) and Louisiana Energy Services, L.P. (LES) National Enrichment Facility (NEF) Proceedings<sup>1</sup>

<b>Contested ESP Proceedings</b> <i>(North Anna and Clinton Proceedings,</i> 68 Fed. Reg. 67,489 (Dec. 2, 2003); 68 Fed. Reg. 69,426 (Dec. 12, 2003))	<b>Uncontested ESP Proceeding</b> <i>(Grand Gulf Proceeding,</i> 69 Fed. Reg. 2636 (Jan. 16, 2004))	<b>LES NEF Proceeding (Contested)</b> (69 Fed. Reg. 5873 (Feb. 6, 2004))
<b>Safety Issue 1:</b> Consider whether the issuance of the ESP will not be inimical to the common defense and security or to the health and safety of the public (Safety Issue 1). <sup>2</sup>	<b>Safety Issue 1:</b> Determine 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 a negative finding on Safety Issue 1 as proposed to be made by the Director, Office of Nuclear Reactor Regulation (NRR). <sup>3</sup>	<b>Safety Issue 1 (Contested):</b> With respect to matters such as whether the application satisfies the standards set forth in this Notice (but not covered by admitted contentions) determine, without conducting a de novo evaluation of the application, whether the application and record of the proceeding contain sufficient information and whether the NRC Staff's review of the application has been adequate to support the findings to be made by the Director of the Office of Nuclear Materials Safety and Safeguards (NMSS).
<b>Safety Issue 2:</b> Consider whether, taking into consideration the site criteria contained in 10 C.F.R. 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 (Safety Issue 2). <sup>4</sup>	<b>Safety Issue 2:</b> Determine 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 an affirmative finding on Safety Issue 2 as proposed to be made by the Director, NRR.	<b>Safety Issue 2 (Contested):</b> No comparable provision
<b>NEPA Issue:</b> Consider whether, in accordance with the requirements of Subpart A of 10 C.F.R. Part 51, the ESP should be issued as proposed. <sup>5</sup>	<b>NEPA Issue:</b> Determined whether the review conducted by the Commission pursuant to NEPA has been adequate. <sup>6</sup>	<b>NEPA Issue (Contested):</b> Determine, without conducting a de novo review, whether the requirements of 10 C.F.R. Part 51 have been met.
<b>Baseline NEPA Issue 1:</b> Determine whether the requirements of NEPA § 102(2)(A), (C), and (E) and Subpart A of 10C.F.R. Part 51 have been complied with in the proceeding. <sup>7</sup>	<b>Baseline NEPA Issue 1:</b> Same.	<b>Baseline NEPA Issue 1:</b> Same. <sup>8</sup>

(Continued)

<b>Contested ESP Proceedings</b> <i>(North Anna and Clinton Proceedings,</i> 68 Fed. Reg. 67,489 (Dec. 2, 2003); 68 Fed. Reg. 69,426 (Dec. 12, 2003))	<b>Uncontested ESP Proceeding</b> <i>(Grand Gulf Proceeding,</i> 69 Fed. Reg. 2636 (Jan. 16, 2004))	<b>LES NEF Proceeding (Contested)</b> (69 Fed. Reg. 5873 (Feb. 6, 2004))
<b>Baseline NEPA Issue 2:</b> Independently consider the final balance among the conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken. <sup>9</sup>	<b>Baseline NEPA Issue 2:</b> Same.	<b>Baseline NEPA Issue 2:</b> Same. <sup>10</sup>
<b>Baseline NEPA Issue 3:</b> Determine, after considering reasonable alternatives, whether the ESP should be issued, denied, or appropriately conditioned to protect environmental values. <sup>11</sup>	<b>Baseline NEPA Issue 3:</b> Same.	<b>Baseline NEPA Issue 3:</b> Determine whether a license should be issued, denied, or appropriately conditioned to protect the environment. <sup>12</sup>

<sup>1</sup> Section 189a(1)(A) of the Atomic Energy Act of 1954 (AEA) states that the Commission shall hold a hearing on each application under AEA section 103 or 104b for a construction permit. Early site permits are a form of construction permit. See 10 C.F.R. § 52.21. AEA section 193 requires that the Commission conduct an on-the-record adjudicatory hearing with regard to the licensing of a uranium enrichment facility. See *id.* § 70.23a.

<sup>2</sup> See *id.* § 2.104(b)(1)(iv).

<sup>3</sup> See *id.* § 2.104(b)(2)(i).

<sup>4</sup> See *id.* § 2.104(b)(1)(i)(d)(2).

<sup>5</sup> See *id.* § 2.104(b)(1)(v).

<sup>6</sup> See *id.* §§ 2.104(b)(2)(ii), 51.105(a)(4).

<sup>7</sup> See *id.* § 51.105(a)(1); see also *Calvert Cliffs' Coordinating Committee, Inc. v. AEC*, 449 F.2d 1109, 1117-19 (D.C. Cir. 1971) [hereinafter *Calvert Cliffs*].

<sup>8</sup> See *id.*

<sup>9</sup> See 10 C.F.R. § 51.105(a)(2); see also *Calvert Cliffs*, 449 F.2d at 1117-19.

<sup>10</sup> See *id.*

<sup>11</sup> See 10 C.F.R. § 51.105(a)(5); see also *Calvert Cliffs*, 449 F.2d at 1117-19.

<sup>12</sup> See *id.*

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Alan S. Rosenthal**, Presiding Officer  
**Dr. Richard F. Cole**, Special Assistant

**In the Matter of**

**Docket Nos. 70-143-MLA  
70-143-MLA-2  
70-143-MLA-3  
(ASLBP Nos. 02-803-04-MLA,  
03-810-02-MLA,  
04-820-05-MLA)**

**NUCLEAR FUEL SERVICES, INC.  
(Erwin, Tennessee)**

**March 28, 2005**

In this proceeding the Licensing Board upholds the NRC Staff's issuance of three license amendment requests submitted to the Nuclear Regulatory Commission by Nuclear Fuel Services, Inc. (Licensee) in support of the proposed Blended Low Enriched Uranium (BLEU) Project, which involves downblending surplus highly enriched uranium (HEU) into a low-enriched uranium (LEU) dioxide product that is expected to be converted to commercial reactor fuel for use in a Tennessee Valley Authority nuclear power reactor.

**NEPA: NRC STAFF REVIEW**

NEPA imposes a procedural requirement on an agency's decisionmaking process by mandating that an agency consider the environmental impacts of a proposed action and inform the public that it has taken those impacts into account in making its decision. See *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. 519, 558 (1978); *Baltimore Gas & Electric*



*Co. v. Natural Resources Defense Council*, 462 U.S. 87, 97 (1983). In other words, an agency must take a “hard look” at the environmental consequences of a proposed action before taking that action. *Baltimore Gas*, 462 U.S. at 97.

#### **NEPA: NRC STAFF REVIEW**

In conducting a NEPA review, the NRC Staff is governed by a “rule of reason” whereby only “reasonably foreseeable” impacts need be addressed. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348-49 (2002). In other words, the Staff is excused from conducting a NEPA analysis of “remote and speculative” impacts or “worst-case” scenarios. *Id.*

### **INITIAL DECISION (Upholding Issuance of License Amendments)**

This proceeding involves three license amendment requests submitted to the Nuclear Regulatory Commission by Nuclear Fuel Services, Inc. (Licensee), in support of its proposed Blended Low Enriched Uranium (BLEU) Project. The project is part of a Department of Energy (DOE) initiative to reduce existing supplies of surplus highly enriched uranium (HEU) through reuse or disposal. The Licensee has contracted with Framatome ANP, Inc. to downblend surplus HEU into a low-enriched uranium (LEU) dioxide product that is expected to be converted to commercial reactor fuel for use in a Tennessee Valley Authority nuclear power reactor. The license amendments at issue in this proceeding authorize the Licensee to produce the LEU dioxide product.

In response to a *Federal Register* notice of opportunity for hearing published in October 2002 (67 Fed. Reg. 66,172), Intervenor State of Franklin Group of the Sierra Club, together with three other groups<sup>1</sup> [hereinafter collectively Sierra], filed timely hearing requests with regard to each of the three license amendment applications. In LBP-04-5, 59 NRC 186 (2004), the requests were granted. At the same time, hearing requests filed by another organization and numerous individuals were denied for lack of the requisite standing.<sup>2</sup>

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<sup>1</sup> Friends of the Nolichucky River Valley, Oak Ridge Environmental Peace Alliance, and Tennessee Environmental Council.

<sup>2</sup> The hearing requests were submitted and acted upon in the context of the then provisions of Subpart L, the portion of the Commission’s Rules of Practice applicable to the adjudication of materials license proceedings. 10 C.F.R. § 2.1201 *et seq.* Thereafter, effective February 13, 2004, the Rules of Practice

*(Continued)*

In the wake of the grant, and in accordance with an established schedule for resolving the merits of the matters in issue, Sierra Club filed its written presentation on October 14, 2004; the Licensee and the NRC Staff filed their responsive written presentations on December 22, 2004; and Sierra Club filed its reply presentation on February 11, 2005, to which the Licensee responded on February 23, 2005. It appearing to Judge Cole and this presiding officer that the several presentations were sufficient to enable an informed consideration and disposition of the issues raised by Sierra, no supplemental oral presentations were solicited.

For the reasons set forth hereinafter, we uphold the NRC Staff's issuance of the license amendments in question.<sup>3</sup>

## I. BACKGROUND

The Licensee is the holder of Special Nuclear Material (SNM) License No. SNM-124, which authorizes it to process HEU into a classified fuel product; to process scrap materials containing HEU to recover uranium; and to perform various decommissioning activities at its Erwin, Tennessee site. The BLEU Project, the subject of the license amendment requests at issue here, requires the use of four buildings at the Licensee's Erwin, Tennessee site, collectively referred to as the BLEU Complex. They are the BLEU Preparation Facility (BPF), to be located in an existing structure, and three newly constructed buildings: the Uranyl Nitrate Building (UNB), the Oxide Conversion Building (OCB), and the Effluent Processing Building (EPB). Downblending of the HEU will occur at the BPF, located in an existing but inactive area at the site. The UNB will be employed to store low-enriched uranyl nitrate (UN) solution produced at the BPF. The OCB will then process the low-enriched UN solution into a UO<sub>2</sub> powder using the

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codified in 10 C.F.R. Part 2 underwent a substantial revision. *See* 69 Fed. Reg. 2182 (Jan. 14, 2004). The Commission not having directed otherwise, however, this proceeding remains subject to the provisions of the now-superseded Subpart L, and any references to the Rules of Practice in this decision will be to those provisions.

<sup>3</sup> Neither the filing nor the grant of the Sierra hearing requests precluded the issuance of the sought license amendments. *See* 10 C.F.R. § 2.1205(m). Sierra's motion for a stay of such issuance was denied. LBP-04-2, 59 NRC 77 (2004).

While the ultimate decisional responsibility in Subpart L proceedings may lie with the presiding officer, the applicable Rules of Practice also contemplate that a member of the Licensing Board Panel with technical expertise will participate actively in the adjudication of any proceeding to which assigned as Special Assistant. *See* 10 C.F.R. § 2.722. In this instance, Judge Cole played an important role in the assessment of the record pertaining to the presented issues, particularly the issue of interpretation of the Licensee's use of certain data in its Integrated Safety Analysis. The determinations reached in this Decision have his endorsement.

ammonium diuranate (ADU) process. The liquid sodium nitrate waste stream from the OCB is to be received and treated at the EPB.

The Licensee submitted its license amendment application in three parts: the first for the UNB, the second for the BPF, and the third for the OCB and EPB. Sierra responded to the license amendments in three separate hearing requests, which were later consolidated for adjudicatory consideration.

Although in its hearing requests Sierra identified a number of areas of concern,<sup>4</sup> in its initial written presentation it focused on just one of them: the NRC Staff's conclusion in an environmental assessment (EA) that there was no necessity to prepare a full environmental impact statement (EIS), a conclusion reflected in the issuance of a finding of no significant [environmental] impact.<sup>5</sup> On that score, Sierra insisted that the evidentiary record, in particular NFS's license amendment application and the NRC Staff's review documents, showed that "the potential for a range of serious accidents at the proposed BLEU Project falls squarely within the probability range considered by the NRC to be reasonably foreseeable and, therefore, to require preparation of an EIS."<sup>6</sup> Sierra further asserted that the BLEU Project met the NRC's qualitative criteria requiring preparation of an EIS.<sup>7</sup>

On December 22, 2004, the Licensee and the NRC Staff filed their responses to Sierra Club's written presentation. The Staff asserted that, for the reasons assigned in its submission, it complied fully with NEPA in performing an environmental assessment of the project as a whole and supplemental environmental reviews for each of the three associated license amendments.<sup>8</sup>

For its part, the Licensee similarly maintained that the Staff fully met its statutory and regulatory requirements under NEPA.<sup>9</sup> Further, it insisted that Sierra's challenge to the NRC Staff's NEPA review was fundamentally flawed because it relied on a misapplication of information from the BLEU Project Integrated Safety Analyses (ISAs) that the Licensee had supplied to the Staff.<sup>10</sup> According to the Licensee, because of this misapplication, Sierra overestimated the probability

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<sup>4</sup> See LBP-04-5, *supra*, 59 NRC at 198-99.

<sup>5</sup> See generally Legal and Evidentiary Presentation by State of Franklin Group of the Sierra Club, Friends of the Nolichucky River Valley, Oak Ridge Environmental Peace Alliance, and Tennessee Environmental Council Regarding U.S. Nuclear Regulatory Commission Staff's Failure To Comply With National Environmental Policy Act in Licensing the Proposed BLEU Project (Oct. 14, 2004) [hereinafter Sierra Presentation].

<sup>6</sup> See *id.* at 23.

<sup>7</sup> *Ibid.*

<sup>8</sup> See NRC Staff Response to the Legal and Evidentiary Presentation of the Sierra Club et al. (Dec. 22, 2004) at 20 [hereinafter Staff Response].

<sup>9</sup> See Applicant's Written Presentation in Response to Intervenors' Written Legal and Evidentiary Presentation (Dec. 22, 2004) at 14 [hereinafter Licensee Response].

<sup>10</sup> See *id.* at 33.

of BLEU Project accidents, and exaggerated the potential consequences from these accidents, thus overstating the overall risk associated with the project.<sup>11</sup>

In its reply presentation, Sierra focused exclusively on its claim that preparation of an EIS was required. Sierra did not present any affirmative evidence of its own to support that proposition; rather, it relied entirely on its interpretation of information in the ISA Summaries that had been provided by the Licensee. Specifically, Sierra claims that the NRC Staff failed to take into account quantitative probability estimates provided in the Summaries that, according to Sierra, show that the potential adverse environmental impacts of the proposed BLEU Project are of the severity requiring preparation of an EIS.

## II. ANALYSIS

A. As noted above, Sierra's challenge to the authorization of the BLEU Project is based entirely on the proposition that the NRC Staff failed to comply with the requirements of the National Environmental Policy Act of 1969, as amended, 42 U.S.C. §§ 4321, 4331-35 (NEPA). Specifically, Sierra asserts that the NRC Staff failed to consider information that shows that the potential impacts of the BLEU Project are of such severity that the preparation of an EIS is required. In response, the NRC Staff (supported by the Licensee) maintains that, in approving the license amendments, it complied fully with the requirements of NEPA and Commission regulations implementing NEPA.

Before evaluating these competing assertions, it is necessary to examine the relevant provisions of NEPA and the NRC regulations implementing that statute. Section 102(2)(C) of NEPA provides:

The Congress authorizes and directs that, to the fullest extent possible . . . (2) all agencies of the Federal Government shall

. . . .

(C) include in every recommendation or report on proposals for legislation and other 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

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<sup>11</sup> See *ibid.*

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.<sup>12</sup>

As the Supreme Court has observed, NEPA thus imposes a procedural requirement on an agency's decisionmaking process by mandating that an agency consider the environmental impacts of a proposed action and inform the public that it has taken those impacts into account in making its decision.<sup>13</sup> In other words, an agency must take a "hard look" at the environmental consequences of a proposed action before taking that action.<sup>14</sup>

Commission regulations implementing NEPA are found in 10 C.F.R. Part 51.<sup>15</sup> That part provides guidelines for the Staff to determine whether an environmental assessment will suffice or whether, instead, an environmental impact statement is required. In that regard, section 51.20 specifies that an EIS must be prepared where "[t]he proposed action is a major federal action significantly affecting the quality of the human environment" or where the Commission, in its discretion, determines that an EIS is required.

Section 51.20(b) sets forth those actions that the Commission has determined require the preparation of an EIS. As to all other licensing and regulatory actions necessitating an environmental review,<sup>16</sup> the Staff first prepares an environmental assessment for the purpose of determining whether the action is, in fact, a "major Federal action significantly affecting the quality of the human environment" requiring preparation of an EIS. The EA must identify the proposed action and include:

- (1) A brief discussion of:
  - (i) The need for the proposed action;
  - (ii) Alternatives as required by section 102(2)(E) of NEPA;
  - (iii) The environmental impacts of the proposed action and alternatives as appropriate; and
- (2) A list of agencies and persons consulted, and identification of sources used.<sup>17</sup>

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<sup>12</sup> 42 U.S.C. § 4332(2)(C).

<sup>13</sup> See *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. 519, 558 (1978); *Baltimore Gas & Electric Co. v. Natural Resources Defense Council*, 462 U.S. 87, 97 (1983).

<sup>14</sup> *Balt. Gas*, 462 U.S. at 97.

<sup>15</sup> See 10 C.F.R. § 51.10(a).

<sup>16</sup> There are certain such actions that do not require any such review. 10 C.F.R. §§ 51.21, 51.22(a)-(d). They are of no moment here.

<sup>17</sup> 10 C.F.R. § 51.30(a).

Based on the findings contained in the EA, the Staff either moves forward to prepare an EIS or issues a finding of no significant [environmental] impact (FONSI). Where the Staff determines that a FONSI is appropriate, its finding to that effect must:

- (1) Identify the proposed action;
- (2) State that the Commission has determined not to prepare an [EIS] for the proposed action;
- (3) Briefly present the reasons why the proposed action will not have a significant effect on the quality of the human environment;
- (4) Include the [EA] or a summary of the [EA]. If the assessment is included, the finding need not repeat any of the discussion in the [EA] but may incorporate it by reference;
- (5) Note any other related environmental documents; and
- (6) State that the finding and any related environmental documents are available for public inspection and where the documents may be inspected.<sup>18</sup>

In conducting its review, the NRC Staff is governed by a “rule of reason” whereby only “reasonably foreseeable” impacts need be addressed.<sup>19</sup> In other words, the Staff is excused from conducting a NEPA analysis of “remote and speculative” impacts or “worst case” scenarios.<sup>20</sup>

B. Against this background, we turn to the basis of Sierra’s insistence that the NRC Staff failed to fulfill its statutory and regulatory responsibilities in conducting its review of the BLEU Project license amendment applications. In its first written presentation, Sierra asserts that the evidentiary record, primarily NFS’s license amendment application and the NRC Staff’s environmental and safety review documents, “demonstrates unequivocally that the impacts of the proposed BLEU Project meet both the NRC’s quantitative and qualitative criteria for preparation of an EIS.”<sup>21</sup> In its reply presentation, Sierra emphasizes that the NRC Staff failed to take into account the quantitative probability estimates used by the Licensee in its ISA Summaries, which Sierra maintains show that the potential adverse environmental impacts of the proposed BLEU Project are of the severity requiring preparation of an EIS.

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<sup>18</sup> 10 C.F.R. § 51.32(a).

<sup>19</sup> See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348-49 (2002).

<sup>20</sup> *Ibid.*

<sup>21</sup> Sierra Presentation at 23.

On that score, Sierra claims that, by failing to consider these estimates, the Staff failed to take the “hard look” required by NEPA. In its view, “[t]he pivotal question in this case is whether, in refusing to prepare an EIS for the proposed BLEU Project, the NRC Staff gave [the quantitative probability estimates in NFS’s ISA Summaries] reasoned consideration.”<sup>22</sup> Sierra thus hinges its entire argument on two propositions: (1) in meeting its NEPA burden, the NRC Staff was required to consider the quantitative probability estimates in the ISA Summaries prepared by the Licensee; and (2) the Staff failed to consider this information and thus did not meet its burden.

According to the Staff, as part of its environmental review of the proposed BLEU Project, it reviewed the ISA Summaries prepared by NFS pursuant to 10 C.F.R. Part 70. Although noting that review of the ISAs is not a required part of its environmental review, the Staff stated that it nonetheless had “reviewed the ISA summaries submitted by NFS to confirm that [it] considered all potential accidents during its environmental review.”<sup>23</sup> That examination had revealed that “there were no potential accidents that the Staff had not already considered,” and thus “confirmed the validity of its findings that there would be no significant impacts from accidents due to the BLEU amendments.”<sup>24</sup>

For its part, the Licensee maintains that the NRC Staff met its burden under NEPA. Additionally, the Licensee insists that Sierra misinterpreted the facts and misapplied the data provided in the ISA Summaries, and that, contrary to the Sierra claim, these data do not represent the probabilities of occurrence for accident sequences at the facility.

We now turn to consider the substance of the Sierra claim and the responses thereto.

1. Section 70.62 of 10 C.F.R. requires each licensee or applicant to prepare an ISA. By reason of section 70.65, a summary of the fruits of the ISA must be included in the application for a license, license renewal, or license amendment.<sup>25</sup>

The preparation of an ISA and associated summary involves identifying potential accidents and accident sequences that would result in unacceptable

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<sup>22</sup> Legal and Evidentiary Reply Presentation by State of Franklin Group of the Sierra Club, Friends of the Nolichucky River Valley, Oak Ridge Environmental Peace Alliance, and Tennessee Environmental Council Regarding U.S. Nuclear Regulatory Commission Staff’s Failure To Comply with National Environmental Policy Act in Licensing the Proposed BLEU Project (Feb. 11, 2005) at 5 [hereinafter Sierra Reply].

<sup>23</sup> Staff Response at 28-29 (*citing* Aff. ¶ 17).

<sup>24</sup> *Ibid.*

<sup>25</sup> “Integrated Safety Analysis” is defined by 10 C.F.R. § 70.4 as “a systematic analysis to identify facility and external hazards and their potential for initiating accident sequences, the potential accident sequences, their likelihood and consequences, and the items relied on for safety.”

consequences and assessing the expected likelihood of those consequences.<sup>26</sup> In the ISA, the applicant (here, Licensee) also identifies and describes the controls or safety systems necessary to prevent those accidents or to mitigate their consequences, and identifies and describes measures taken to ensure that the items relied on for safety (IROFS) are reliable and available to perform their functions when needed.<sup>27</sup> Section 70.61 describes performance requirements for two categories of accident sequence consequences: “high consequence” and “intermediate consequence.”<sup>28</sup> For each accident sequence analyzed in the ISA, the applicant assigns an “Initiating Event Frequency Index” to the

<sup>26</sup> All credible events (accident sequences) involving process deviations or other events internal to the facility (e.g., explosions, spills, and fires), and credible external events that could result in facility-induced consequences to workers, the public, or the environment, that could exceed the performance requirements of 10 C.F.R. § 70.61 are examined. At a minimum, external events normally include: (1) natural phenomena events such as floods, high winds, tornadoes, and earthquakes; (2) fires external to the facility; and (3) transportation accidents and accidents at nearby industrial facilities. *See* Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility, Final Report (Mar. 2002), NUREG-1520, at 3-2 [hereinafter NUREG-1520].

<sup>27</sup> *See* Licensee Response at 34-36.

<sup>28</sup> These two categories suggest that a third category of “less than intermediate” might also be included, but 10 C.F.R. § 70.61 is silent in that respect. NUREG-1520 does include, however, in its discussion of ISAs, a “less than intermediate” category, and identifies it as “Low Consequence.” The “Low Consequence” category is found in Table A-1:

**Table A-1: Consequence Severity Categories Based on 10 C.F.R. § 70.61**

Category	Workers	Offsite Public	Environment
High Consequence	*RD > 1 Sievert (Sv) (100 rem) **CD = endanger life	RD > 0.25 Sv (25 rem) 30 mg sol U intake CD = long-lasting health effects	
Intermediate Consequence	0.25 Sv (25 rem) < RD ≤ 1 Sv (100 rem) CD = long-lasting health effects	0.05 Sv (5 rem) < RD ≤ 0.25 Sv (25 rem) CD = mild transient health effects	Radioactive release > 5000 x Table 2 of 10 C.F.R. Part 20, Appendix B
Low Consequence	Accidents of lower radiological and chemical exposures than those above in this column	Accidents of lower radiological and chemical exposures than those above in this column	Radioactive releases producing lower effects than those referenced above in this column

\*RD = Radiological Dose

\*\*CD = Chemical Dose

NUREG-1520 at 3-A-2.



initiating and enabling events.<sup>29</sup> It then assigns “Effectiveness of Protection Index” values to each IROFS that is employed to prevent the accident or mitigate its consequences.<sup>30</sup> The Initiating Event Frequency values are used to arrive at an “Uncontrolled Likelihood Index T” value. This represents a qualitative index of the likelihood of an unmitigated, uncontrolled accident consequence (i.e., no credit is given for any of the IROFS that would be involved in an actual accident sequence). The second summation adds both the Initiating Event Frequency Index values and the Effectiveness of Protection Index values to arrive at the “Controlled Likelihood Index T” value. The difference between the Controlled and Uncontrolled Likelihood Index T values shows the increased level of safety provided by the IROFS in the controlled sequence.<sup>31</sup>

Sierra asserts that the Controlled Likelihood Index T values (e.g., -3, -4, -5, etc.) that are contained in the ISA Summaries upon which it relies represent exact quantitative accident probabilities corresponding to accident frequencies of  $10^{-3}$ ,  $10^{-4}$ ,  $10^{-5}$ , etc., per accident per year.<sup>32</sup> Sierra would have it that accidents with such high probabilities and consequences are of sufficient severity that preparation of an EIS is required, and further, that the NRC Staff failed to consider these estimates in its environmental review. According to Sierra, “there is no evidence in this record that the NRC Staff gave any consideration whatsoever to NFS’s estimates of the probability of high and intermediate consequence accidents in deciding not to prepare an EIS.”<sup>33</sup> It further states that “the NRC was required to consider this . . . quantitative information in determining whether to prepare an EIS for the proposed BLEU Project.”<sup>34</sup>

2. Thus, the sole question before us is whether there is substance to Sierra’s reliance on information contained in the ISA Summaries — and that alone — as mandating the preparation of an EIS. As earlier observed, the Licensee submitted its license amendment application in three parts: the first for the UNB, the second for the BPF, and the third for the OCB and EPB. Rather than segregate the environmental reviews for each part of the BLEU Complex, the Staff decided to perform a single NEPA review that considered the environmental impacts of

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<sup>29</sup> An example of an initiating event might be a valve failure allowing uncontrolled addition of HEU to a tank. An enabling event is a subsequent event that must take place for the accident sequence to proceed to a point where adverse consequences might occur.

<sup>30</sup> See Licensee Response, Declaration of Robert L. Frost Regarding NFS Response to Criticality Accident Sequences Cited by Intervenors in Their Written Presentation (Dec. 14, 2004) at 6-7 [hereinafter Frost Decl.]; Licensee Response, Declaration of Jennifer K. Wheeler and Carol L. Mason Regarding Chemical Accident and Risk Issues (Dec. 15, 2004) at 6-8 [hereinafter Wheeler/Mason Decl.].

<sup>31</sup> Licensee Response at 35.

<sup>32</sup> Sierra Reply at 10-16.

<sup>33</sup> *Id.* at 7.

<sup>34</sup> *Id.* at 20.

the entire project. To aid in this review, on November 9, 2001, the Licensee submitted a Supplement to Applicant's Environmental Report (SAER), which covered potential impacts of all three license amendments. The SAER was supplemented on January 15, 2002, March 15, 2002, and April 12, 2002.

Issued by the Staff on June 30, 2002, the first EA (June 2002 EA) contained the Staff's assessment of the potential environmental impacts of all three license amendments. Because at that time only one of the license amendment applications had been submitted, the Staff expressed its intent to perform an additional review for each successive license amendment application, to determine whether the June 2002 EA sufficiently considered the environmental impacts of the proposed action. The Staff did, in fact, perform two additional reviews, determining in each that the June 2002 EA adequately assessed the environmental impacts of the entire BLEU Project. A finding of no significant impact (FONSI) was issued for the first license amendment on July 9, 2002, and an EA and FONSI were issued for the second and third license amendments on September 17, 2003, and June 14, 2004, respectively.

In performing its environmental review and assessing the environmental impacts of the license amendments, the Staff examined new impacts expected from both normal operations and potential accidents. According to the Staff's affiants, the Staff did not extensively reanalyze operations that were evaluated in previous EAs prepared for the existing NFS facility; rather, previously evaluated operations "provided a baseline for the Staff's environmental evaluation of the amendments."<sup>35</sup> The Staff also considered the cumulative impact of new impacts added to existing impacts, and determined that there were, in fact, some additional environmental impacts from normal operations. These impacts, however, were determined in the June 2002 EA to be not significant. The Staff ultimately concluded that the BLEU Project did not result in the potential for new accidents or more significant environmental impacts beyond those already possible from existing operations. Further, it determined that minimal new environmental impacts from normal operations added to existing environmental impacts did not result in significant cumulative impacts.<sup>36</sup>

In the course of the review, the Staff considered three categories of accidents: (1) criticality, (2) radiological, and (3) chemical. For each type of accident, it evaluated the accidents with the most potentially significant consequences to determine whether they were bounded by previous environmental assessments.<sup>37</sup>

A criticality accident, according to the Staff, is the most potentially serious credible accident that might occur at the BLEU Project. The possibility of such an

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<sup>35</sup> Staff Response, Affidavit of Mary T. Adams, Michael A. Lamastra, and Donald E. Stout (Dec. 22, 2004), ¶ 7 [hereinafter Adams Aff.].

<sup>36</sup> *Ibid.*

<sup>37</sup> *Id.* ¶ 8.

accident was previously evaluated in both the 1991 and 1999 license renewal EAs prepared in connection with the activities in which the Licensee was then engaged. The only potential difference recognized by the Staff between a criticality accident at the BLEU Project and one occurring during the previously conducted license activities is the location of the material being processed. However, although an accident at one of the new buildings could take place slightly closer to the site boundary than an accident occurring at the present facility, the Staff concluded that this difference would have only a minimal impact on any offsite dose, and thus that the license amendments at issue would not result in the potential for a new, or more serious, criticality accident.<sup>38</sup>

The Staff also considered that a radiological release could be initiated by an event other than a criticality accident, such as a fire or explosion. It noted, however, that “[b]ecause the dispersion mechanism is the same for any radiological release, whether initiated by criticality or another event, and criticality has by far the largest potential source term for a radiological accident, criticality is bounding for all potential radiological releases at the BLEU Project.”<sup>39</sup>

The third and final type of potential accident considered by the Staff was a chemical accident. The Staff concluded that the most potentially serious chemical accidents would be a release of 67 weight percent nitric acid, a liquid release of uranyl nitrate (UN), and a liquid release of aqueous ammonia. Regarding a release of nitric acid, the Staff concluded that “[a] 67 weight percent nitric acid release at the BLEU Project is bounded by the nitric acid release at the existing NFS facility that was evaluated in the 1991 EA.”<sup>40</sup>

Although a UN release, according to the Staff, would not be a new accident at the Erwin site, the Staff considered that the UN storage tanks for the BLEU Project are larger than those used in operations at the existing facility. For the most severe accident considered credible — a failure of two large UN storage tanks — the Staff concluded that three-fourths of the total volume would be contained in the building dike and the remainder would be released to the environment. Although the liquid plume would be contained by the site drainage system and would thus not reach any surface water, an airborne plume would also be released. The chemical of concern in a UN release, the Staff concluded, is nitric acid, but the nitric acid concentration in UN is less than 67 weight percent, and thus “the consequences of a UN release are bounded by the Staff’s evaluation of a 67 weight percent nitric acid release.”<sup>41</sup>

An ammonia release accident was evaluated in the 1991 EA, and the Staff concluded that the 1991 analysis bounds any potential release at the BLEU Project.

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<sup>38</sup> *Id.* ¶ 9.

<sup>39</sup> *Id.* ¶ 10.

<sup>40</sup> *Id.* ¶ 12.

<sup>41</sup> *Id.* ¶ 13.

The Staff noted that “while the concentrations [of ammonia] used in the BLEU Project vary slightly from those used at the NFS facility, the entire liquid release would be contained within a dike and the airborne plume dispersion would be the same as for an ammonia release at the NFS facility.”<sup>42</sup>

Thus, for the three types of accidents evaluated by the Staff in its environmental review, the Staff determined that the impacts from accidents possible as a result of the BLEU Project were bounded by impacts evaluated in previous environmental reviews and determined to be insignificant. Once again, in its rebuttal presentation, there was no attempt on the part of Sierra to counter substantively the sufficiency of the Staff’s analysis or conclusions.

3. In its response, the Licensee asserts that Sierra has misinterpreted the facts and misapplied the data provided in the ISA Summaries, and that those data do not serve to estimate the probabilities of occurrence for accident sequences at the facility, as Sierra would have it. Although bearing some resemblance to quantitative probabilities, the Licensee insists that the data are simply indexes providing “qualitative envelopes or bounding maxima” that demonstrate that the potential accident sequence likelihoods have been reduced to or below the NRC safety regulations.<sup>43</sup>

The Licensee’s affiants assert that Sierra has not considered that (1) the likelihood indices provide conservative estimates; and (2) the analysis stops once the ISAs demonstrate that the accident sequences are “highly unlikely” (in the case of accidents with “high” consequences) or “unlikely” (in the case of accidents with “intermediate” consequences) — thus meeting the requirements of 10 C.F.R. § 70.61.<sup>44</sup> Accordingly, there is no assessment of the actual probabilities of each sequence. Further, the affiants address each of the accident scenarios or sequences that Sierra referenced in its presentation and set forth the basis for their belief that the results are conservative and in complete compliance with section 70.61.<sup>45</sup>

In evaluating the Licensee’s position in this regard, it must be kept in mind that 10 C.F.R. § 70.61 does not quantify the terms “highly unlikely” or “unlikely.” Section 70.61(b) states merely that:

The risk of each credible high-consequence event must be limited. Engineered controls, administrative controls, or both, shall be applied to the extent needed to reduce the likelihood of occurrence of the event so that, upon implementation of

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<sup>42</sup> *Id.* ¶ 14.

<sup>43</sup> Licensee Response at 37.

<sup>44</sup> Frost Decl. at 1.

<sup>45</sup> Wheeler/Mason Decl. at 19, 20; Frost Decl. at 30-31.

such controls, the event is highly unlikely or its consequences are less severe than those in paragraphs (b)(1)-(4) of this section.<sup>46</sup>

For its part, 10 C.F.R. § 70.65(b)(9) requires that the applicant provide “[a] description of the definitions of unlikely, highly unlikely, and credible as used in the evaluations in the integrated safety analysis.” It thus appears that the applicant has the task of proposing what an acceptable risk is. The Staff, however, provided guidance to applicants in its March 2002 Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility, NUREG-1520 (NUREG-1520).<sup>47</sup> Regarding quantitative acceptance criteria for “unlikely” and “highly unlikely” as applied to individual accident sequences identified in the ISA, NUREG-1520 states that a likelihood of less than  $10^{-4}$  per event per year is acceptable for “unlikely,” and a likelihood of less than  $10^{-5}$  per event per year is acceptable for “highly unlikely,” for purposes of showing compliance with 10 C.F.R. § 70.61.<sup>48</sup> The stated guidelines are used to define the largest likelihood values that would be acceptable limits. Definitions based on lower limits are also acceptable.<sup>49</sup>

The Licensee’s definitions of “highly unlikely,” “unlikely,” and “credible,” developed in accordance with section 70.65(b)(9), are set forth in the presentation of its affiants, Wheeler and Mason.<sup>50</sup> Those definitions and the acceptance criteria used by the Licensee appear to be consistent with the Staff guidance provided in NUREG-1520. In this connection, Sierra did not suggest that these definitions and criteria are inappropriate or inadequate.

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Based on the foregoing, Judge Cole and this presiding officer are compelled to conclude that Sierra has provided no reason that might justify a withholding of the license amendments sought for the BLEU Project. In the final analysis, the matter comes down to this.

As noted, in the three hearing requests addressed to the project, Sierra advanced several areas of concern that were found in LBP-04-5 to be viable. In its written presentations, however, Sierra elected to confine its challenge to the NRC Staff’s conclusion, following its environmental review, that a full environmental impact statement need not be prepared, a conclusion that prompted the issuance of the

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<sup>46</sup> Section 70.61(c) discusses the risk associated with intermediate consequence events. See Table A-1 in note 28, *supra*, for the radiological and chemical dose limits listed in 10 C.F.R. §§ 70.61(b) and (c).

<sup>47</sup> See NUREG-1520 at 3-21 through 3-28.

<sup>48</sup> *Id.* at 3-28.

<sup>49</sup> *Ibid.*

<sup>50</sup> See Wheeler/Mason Decl. at 9-10.

finding of no significant environmental impact associated with the carrying out of the project.

We have also seen that, in insisting that the significant possibility of an accident with serious environmental consequences required the preparation of an EIS, Sierra did not offer one scintilla of affirmative evidence tending to buttress that claim. Nor did it include in its rebuttal presentation any expert opinion to counter the affidavits supplied by the Staff and Licensee in response to that claim.

A like situation obtained in *FMRI, Inc.* [formerly *Fansteel, Inc.*] (Muskogee, Oklahoma Facility), LBP-04-8, 59 NRC 266 (2004). In that case, the State of Oklahoma challenged on a variety of grounds a site decommissioning plan presented by the Licensee for the Staff's approval. The State offered, however, no expert opinion either to support the challenge or (in its rebuttal written presentation) to counter the expert evidence supplied by way of affidavits in the Staff and Licensee responsive presentations. With regard to this state of affairs, the presiding officer observed:

To be sure, that absence cannot be taken as fatal *per se* to Oklahoma's cause. It was open to the State to endeavor to establish, by argumentation without more, that the Staff's and Licensee's expert testimony was so flawed or unpersuasive as to warrant receiving little, if any, weight. Needless to say, however, that is a difficult undertaking that is not invariably successful.<sup>51</sup>

The endeavor was there found short of the mark with the consequence that the Oklahoma challenge to the decommissioning plan was rejected in LBP-04-8. Here, Sierra fares no better in relying virtually exclusively upon its interpretation of certain quantitative accident probability estimates found in the ISA Summaries that had been supplied to the Staff by the Licensee.

We need not pause to decide whether, and if so to what extent, the Staff is obliged by either statute or regulation to consider the content of ISAs in the course of taking the requisite "hard look" at the environmental consequences of the proposed BLEU Project. For one thing, we have been given no reason to question the Staff's representation that it reviewed the ISA Summaries to confirm that its environmental review had considered all potential accidents. More importantly, we are satisfied that the approach that the Staff took in addressing the accident probability issue (as outlined above) met the NEPA standard.

In addition, there is the matter of the Licensee's insistence that Sierra has misinterpreted the ISA Summaries, with the result that they did not lend support to the claim of a sufficient probability of a serious accident as to necessitate the preparation of an EIS. On its face, the Licensee's explanation of the basis for this insistence seems wholly plausible. In any event, in its rebuttal presentation,

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<sup>51</sup> 59 NRC at 271.

Sierra made no attempt to demonstrate that the explanation was flawed. That being so, Sierra is hardly in a position to complain of our unwillingness to attach the significance to the Summaries that would be required in order to sustain its claim of a NEPA violation on the part of the Staff.

The short of the matter is that, particularly when considered in the light of the substantive showings of the Licensee and Staff, what Sierra has chosen to put before us does not come close to what was necessary to give credence to the single Sierra concern that has been addressed in its written presentations. There is simply no basis in the record at hand for a determination on our part that the Staff's environmental review failed adequately to consider the possibility of the occurrence of an accident with serious environmental consequences. That being so, we have been given no reason to overturn either the Staff's conclusion that an EIS was not required or the FONSI that accompanied it.

Accordingly, the issuance of the requested license amendments authorizing the Blended Low Enriched Uranium (BLEU) Project must be, and hereby is, *upheld*, and these proceedings are *terminated*.

As authorized by 10 C.F.R. § 2.1253, if so inclined, Sierra may petition the Commission for review of this Decision in accordance with the procedures set forth in now-superseded sections 2.786 and 2.763 of the Rules of Practice (*see* note 2, *supra*). Pursuant to section 2.786(b)(1), the petition for review must be filed within fifteen (15) days of the service of this Decision and must meet the requirements set forth elsewhere in subsection (b)(2). Within ten (10) days after service of the petition, other parties to the proceeding may file answers either supporting or opposing its grant. 10 C.F.R. § 2.786(b)(3). For its part, section 2.763 authorizes a party to request the Commission to allow oral argument with regard to the petition.

It is so ORDERED.

BY THE PRESIDING OFFICER<sup>52</sup>

Alan S. Rosenthal  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
March 28, 2005

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<sup>52</sup> Copies of this Initial Decision were sent this date by Internet electronic mail transmission to the counsel for Sierra, the Licensee, and the NRC 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)**

**March 31, 2005**

The Presiding Officer calls the Commission's attention to the extended history of the U.S. Army proceeding, and the current lack of assurance that it will move forward in the near term.

**ADJUDICATORY BOARDS: DELEGATED AUTHORITY**

A presiding officer's jurisdiction in informal proceedings does not extend to superintending the Staff's discharge of its review functions.

**MEMORANDUM**  
**(Bringing Matter of Concern to Commission's Attention)**

Between 1984 and 1994, the Department of the Army (Licensee) conducted, under the auspices of an NRC materials license (SUB-1435), accuracy testing of depleted uranium (DU) tank penetration rounds at its Jefferson Proving Ground (JPG) site located in Madison, Indiana. Some 5 years after cessation of testing, on December 16, 1999, the NRC Staff published in the *Federal Register* a notice of opportunity for hearing on a license amendment application that had



been submitted to it by the Licensee. The sought amendment called for the decommissioning of the JPG site, on which a substantial quantity of DU munitions had accumulated as a result of the testing activities, in accordance with a plan that had been submitted to the Staff. *See* 64 Fed. Reg. 70,294.

In response to the *Federal Register* notice, Save the Valley, Inc. (Petitioner), an organization with members residing in the immediate vicinity of the JPG site, sought a hearing. On a determination that it fulfilled the requirements of the then-provisions of Subpart L of the Rules of Practice, this Presiding Officer granted the hearing request in March 2000. *See* LBP-00-9, 51 NRC 159.

It is now 5 years later and there has yet to be a single filing by any party addressed to the Petitioner's quite legitimate concerns regarding what disposition is to be made of the amassed DU munitions on the JPG site. And, perhaps of still greater significance, more than a decade has now passed since the testing activities were brought to an end.

As is evident from the discussion below, the responsibility for this state of affairs cannot be laid at the doorstep of the Petitioner. Rather, it has been brought about by the conduct of the Licensee over the course of the past 5 years, conduct that has received to a significant extent the seeming indulgence of the Staff.

For reasons that will also be detailed, it is the belief of both Judge Abramson and this Presiding Officer that remedial measures might be called for that are beyond our power to put into effect. Accordingly, we are placing the matter before the Commission to enable it to determine what, if any, action on its part is warranted in the totality of the present circumstances.

A.1. The March 2000 order granting the Petitioner's hearing request observed that the Licensee had noted the existence of "a distinct possibility that the [then] current decommissioning plan will undergo revision in material respects." LBP-00-9, 51 NRC at 161. In fact, the Licensee's response to the Petitioner's hearing request had specifically requested that "further proceedings be held in abeyance pending the outcome of its anticipated further interaction with the NRC Staff with regard to [that] plan." *Ibid.* In accordance with that unopposed request, the proceeding was placed in a state of suspension. The Licensee was required, however, to submit quarterly status reports.

In June 2001, well over a year later and with the proceeding remaining in suspension, the Licensee submitted to the NRC Staff an entirely new plan, which it denominated its "final decommissioning/license termination plan" (LTP). Although the original plan that had been provided to the Staff in 1999 had been accepted on the administrative review that generally precedes the commencement of a full technical review, the Staff found the newly furnished LTP to contain several deficiencies that required correction before it could be accepted for full review. The Staff did note, however, that it considered the LTP to supersede the earlier submitted plan, with the result that the Staff would not consider the latter any further.

In the circumstances, on the Petitioner's motion, the proceeding was continued in a state of suspension to await the LTP being developed to a level fit for adjudication. *See* LBP-01-32, 54 NRC 283 (2001). That day, however, never arrived.

In the course of its technical review of the LTP, the Staff apparently advised the Licensee that certain additional site-specific sampling and modeling on its part would be required. The Licensee concluded, however, that such an undertaking would pose a safety threat to Licensee and contractor personnel because of the presence onsite of unexploded ordinance. Accordingly, in mid-2003 the Licensee withdrew the LTP and put before the Staff a proposal that it be granted a license amendment that would create 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. On October 28, 2003, the Staff published a *Federal Register* notice that indicated that it was considering the POLA request and provided an opportunity to seek a hearing on it. *See* 68 Fed. Reg. 61, 471.

After consultation with the parties, I entered an order on December 10, 2003 dismissing the proceeding on the LTP, without prejudice to Petitioner seeking to revive it should the decommissioning of the site once again receive active NRC consideration at the Licensee's behest. *See* LBP-03-28, 58 NRC 437. A month later, on January 7, 2004, the Petitioner's timely hearing request regarding the proposed POLA was granted, along with that party's unopposed motion to hold further proceedings in abeyance pending the completion of the Staff's technical review of the POLA. With respect to the motion, I observed that "[a]mong other things, the conclusions reached on that review might have the effect of narrowing considerably the issues requiring adjudication." LBP-04-1, 59 NRC 27, 30.<sup>1</sup>

2. According to the October 28, 2003 *Federal Register* notice, the Staff had accepted the POLA proposal for technical review a week earlier. *See* 68 Fed. Reg. at 61,471. In that circumstance, after waiting some 7 months, on June 1, 2004, I issued an unpublished order in which I called upon the NRC Staff to submit a report "setting forth with particularity the present state of the technical review and furnishing the Staff's best current estimate as to when the review will be completed." In a June 8 response, the Staff stated that it had informed the Licensee in a May 20, 2004 letter that it required further information to complete its evaluation of the Environmental Radiation Monitoring (ERM) Program Plan that had been submitted in support of the amendment application. The Licensee

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<sup>1</sup>Effective February 13, 2004, the Rules of Practice codified in 10 C.F.R. Part 2 underwent substantial revision. *See* 69 Fed. Reg. 2182 (Jan. 14, 2004). The hearing request addressed to the POLA having been submitted and acted upon prior to that date, and the Commission not having directed otherwise, this proceeding remains subject to the provisions of the now-superseded Subpart L governing the adjudication of materials licensing matters. As such, it will continue to be before Judge Abramson and this Presiding Officer until ultimate adjudication.

had been given until August 30, 2004, to supply the sought information and, assuming that it proved adequate, the Staff advised us that it thought it could complete the technical review and issue an environmental assessment (EA) and safety evaluation report (SER) “between early January and early March 2005.”

In an October 4 order (unpublished), I took note of the August 30 deadline for the Licensee’s submission of the additional information and asked the Staff to advise me whether it had been received and, if so, whether it was deemed sufficient to enable the issuance of an EA and SER no later than this March. In an October 14 response, the Staff reported that it was still in need of additional information to enable it to have “sufficient data to complete its evaluation of the ERM Program Plan and issue an EA and SER.” We were also advised that the Staff thus no longer believed that the technical review might be completed by March 2005. Rather, it anticipated “a delay of approximately two months in preparing its analyses commensurate with the additional time required for the Licensee to furnish the necessary information.” The Staff added that it “would be able to provide a more precise estimate for completion of its technical review following actual receipt of the requested information.”

Finally, in a March 3, 2005 order (unpublished), I once again endeavored to determine where matters stood. In its March 18 response to that order, Judge Abramson and I were advised by the Staff that the information the Licensee had supplied in November 2004 and January 2005 was “not sufficient to allow the Staff to proceed with preparation of an EA or SER.” The Staff went on to note that, based upon a January 31, 2005 letter that it had received from the Licensee, it was not clear “how the Licensee intends to proceed.” At the Staff’s request, however, the Licensee “has agreed to provide a letter clarifying its planned path forward with regard to the pending license amendment request.” Pending that clarification, we were told, the Staff “is not in a position to provide an estimated issuance date for the EA and SER.”<sup>2</sup>

B. As the foregoing recitation reflects, some 11 years have now elapsed since the Licensee terminated testing activities on its JPG site that left behind an accumulation of DU munitions. Perhaps more to the point, this past March 23 was the fifth anniversary of the grant of the hearing request of Petitioner, an organization with members who live in proximity to that site and who profess concern about the site’s condition — a concern scarcely unreasonable given that, according to what the Licensee apparently represented to the Staff, the site cannot now be even characterized without subjecting its personnel and that of contractors to an unacceptable safety risk.

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<sup>2</sup>The March 18 Staff filing, as well as its submission last October, had appended documents pertaining to the representations contained therein.

Over the course of the past 5½ years, the Staff has been favored with one proposed decommissioning plan; then a second one that was so deficient as submitted that the Staff would not commence a technical review of it; and, lastly, a proposal that the Licensee be granted a POLA, to be renewable until such time, if ever, that the Licensee should conclude that a site characterization can be safely accomplished. Close to 18 months have elapsed since the POLA proposal was accepted for technical review. Nonetheless, not only has the Staff not completed its technical review and issued the required EA and SER, but also, we are now informed that it is unable to provide at this time any estimate as to when that might be accomplished. This is said to be because of its endeavor to obtain information from the Licensee that is deemed necessary to complete the review but has not as yet been produced.

We find it difficult to believe that what is involved in passing judgment on a POLA proposal is so complex that it should take years to obtain from the Licensee required information. We have not, however, endeavored to explore that matter further. As we understand it, our jurisdiction in proceedings such as this does not extend to superintending the Staff's discharge of its review functions. *See Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-6, 59 NRC 62, 74 (2004). Apparently, the Staff is satisfied with allowing the technical review to remain in limbo while it continues its efforts — to this point far from totally successful — to get from the Licensee the information it considers necessary in order to complete the technical review. Although we might have our doubts as to the warrant for such an approach, as we see it we are foreclosed from either calling upon the Staff to justify it or directing the Licensee to furnish a full explanation regarding its default in furnishing to the Staff the information sought from it.

At the same time, this much is readily apparent. As a result of its failure over an extended period — justified or unjustified — to provide the information the Staff requested, the Licensee has, in effect, possessed the very POLA that is the subject of the present proceeding. Indeed, it might be reasonably said that it has had the equivalent of such a license for the entire 11 years or so since it ceased the testing of the DU munitions. It seems highly unlikely that such was the contemplation of the Staff or the Commission at the time of the grant of the materials license under which the testing was performed — to the contrary, we think it most probable that the expectation was that, upon cessation of operations at the JPG site, a decommissioning plan would be forthcoming in relatively short order.<sup>3</sup>

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<sup>3</sup>That said, we have not undertaken to examine the license to determine whether the Licensee might be in violation of some condition contained therein pertaining to site decommissioning once the activities authorized by the license came to an end. Any inquiry along those lines would be, of

(Continued)

Beyond that, the existing situation appears to us both to work an injustice upon the Petitioner and its members and to be inconsistent with the Commission's expectation — indeed insistence — that NRC adjudicatory proceedings move forward to conclusion with reasonable expedition. On the first score, surely those persons located in the vicinity of the JPG site were entitled to have a final determination made long ago on just what the Licensee would be required to do to ensure that the accumulated materials did not pose a threat to their health and safety. That they have not been heard to complain does not obscure the fact that, 11 years after the licensed activity ceased, the NRC Staff not only still finds itself unable to make such a determination, but also has no current idea when one will be possible. For all that we have been told at this point, additional years might pass before the Staff considers that it has been provided sufficient information by the Licensee to enable it to make an informed judgment of the acceptability of a proposal that has now been before it for evaluation for almost a year and a half.

We have not overlooked that at issue in a license amendment adjudication is the acceptability of the Licensee's proposal under consideration and not (other than with respect to compliance with the dictates of the National Environmental Policy Act (NEPA)) the Staff's review of it. Theoretically at least, the Petitioner therefore might have been called upon to proceed with its challenge to the POLA proposal without waiting for the completion of the Staff's review. As a realistic matter, however, that party hardly could have been expected to address the acceptability or nonacceptability of a proposal that, because of an asserted need for information that the proposal sponsor has not as yet provided, to this day the agency's Staff remains unable to assess. Moreover, until it has completed its environmental appraisal and issued its EA, the question of the Staff's compliance with NEPA requirements will not become ripe for adjudication. All things considered, it is beyond cavil that the Petitioner was fully justified in requesting that further proceedings await the completion of the technical review and the issuance of the EA and SER. This was implicitly recognized by the Licensee and Staff, both of whom acquiesced in the grant of that request.

Based upon the foregoing considerations, Judge Abramson and this Presiding Officer regard the present posture of this proceeding as unacceptable. Nonetheless, we do not believe that we are empowered to endeavor to rectify the situation by injecting ourselves into the Staff's technical review process. Consequently, we are pursuing the only course available to us by calling the Commission's attention to the extended history of this proceeding and to the fact that, as a matter totally

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course, for the NRC Office of Enforcement (OE) to undertake in the first instance. Apparently, the Staff office responsible for the oversight of the licensed activities has seen no reason to call for OE involvement.

beyond our control, there is no current assurance that it will move forward in the near term.

BY THE PRESIDING OFFICER<sup>4</sup>

Alan S. Rosenthal  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
March 31, 2005

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<sup>4</sup> 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

OFFICE OF NUCLEAR REACTOR REGULATION

J. E. Dyer, Director

In the Matter of

Docket No. 50-271  
(License No. DPR-28)

ENTERGY NUCLEAR OPERATIONS, INC.  
(Vermont Yankee Nuclear Power  
Station)

March 10, 2005

By letter dated April 23, 2004, as supplemented on September 10, 2004, the New England Coalition (the Petitioner) filed a petition pursuant to Title 10 of the *Code of Federal Regulations*, section 2.206. The Petitioner requested that the U.S. Nuclear Regulatory Commission (NRC) take the following actions as a result of two pieces of fuel rods missing from their documented location in the spent fuel pool (SFP) at the Vermont Yankee Nuclear Power Station (Vermont Yankee): (1) require Entergy Nuclear Operations, Inc. (Entergy) to perform an accurate and NRC-verified account of the location, disposition, and condition of all irradiated fuel, including fuel currently loaded in the reactor, and (2) order the Licensee to halt all fuel movement at Vermont Yankee until this inventory is completed.

The Petitioner stated that the basis for the requested actions in the petition is that because Entergy lost control of the spent fuel inventory at Vermont Yankee and until all spent fuel was accounted for, the Petitioner would have no confidence that Entergy did not put leaking fuel or suspected leaking fuel assemblies back into the reactor core during the April 2004 refueling outage.

The final Director's Decision on this petition was issued on March 10, 2005. In that Decision, the NRC has concluded, based on the Licensee's inventory to confirm the total number of fuel assemblies and their locations, the location of the individual rods, the successful location of the two fuel rods pieces in the SFP, the core verifications, and documentation of the inventory, that as of July 13, 2004, Entergy is in full compliance with regulatory requirements to account for all special nuclear material in its possession. The NRC concluded that the actions

taken by the Licensee and the NRC had in effect granted the Petitioner's request for a fuel inventory verified by the NRC at Vermont Yankee and an order to stop all fuel movement until this inventory was completed. Thus, no further action was deemed necessary to address these issues. Although the NRC has concluded that Entergy is now in compliance with regulatory requirements to account for all SNM, the special inspection report issued on December 2, 2004, identified an apparent violation of 10 C.F.R. § 74.19, "Material Control and Accounting of Special Nuclear Material — Recordkeeping" related to the two spent fuel rod pieces. The NRC is considering escalated enforcement action for this incident.

## **DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206**

### **I. INTRODUCTION**

By letter dated April 23, 2004, as supplemented on September 10, 2004, Mr. Raymond Shadis of the New England Coalition (the Petitioner) filed a petition pursuant to Title 10 of the *Code of Federal Regulations*, section 2.206. The Petitioner requested that the U.S. Nuclear Regulatory Commission (NRC) take the following actions as a result of the absence of two pieces of fuel rods from their documented location in the spent fuel pool (SFP) at the Vermont Yankee Nuclear Power Station (Vermont Yankee):

- (1) require Entergy Nuclear Operations, Inc. (Entergy or the Licensee), to perform an accurate and NRC-verified inventory of the location, disposition, and condition of all irradiated fuel, including fuel currently loaded in the reactor; and
- (2) order the Licensee to halt all fuel movement at Vermont Yankee until this inventory is completed.

The Petitioner stated that the basis for the requested actions in the petition is that Entergy lost control of the spent fuel inventory at Vermont Yankee and until all spent fuel was accounted for, the Petitioner would have no confidence that Entergy did not put leaking fuel or suspected leaking fuel assemblies back into the reactor core during the April 2004 refueling outage.

In a letter dated April 30, 2004, the NRC informed the Petitioner that the requests for a fuel inventory verified by the NRC at Vermont Yankee and for an order to stop all fuel movement were being referred to the Office of Nuclear Reactor Regulation for appropriate action. This letter stated that a teleconference had been arranged to discuss the petition with the Office of Nuclear Reactor Regulation's Petition Review Board (PRB) on May 5, 2004. By teleconference on May 5, 2004, the Petitioner discussed the petition with the PRB and provided ad-



ditional supporting details. This teleconference was transcribed and the transcript is publicly available as a supplement to the petition. The transcript is available in ADAMS (ML050550412) 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. 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](mailto:pdr@nrc.gov).

By letter dated May 24, 2004, the NRC requested Entergy to:

- (1) document the verification of the inventory of all the special nuclear material (SNM) in the SFP,
- (2) document all other actions Entergy is performing to locate the missing fuel,
- (3) document that the location of the remaining portions of the two spent fuel rod pieces have been verified,
- (4) provide the results of its actions to locate the missing fuel when the current efforts are completed.

By letter dated June 8, 2004, Entergy responded to the above requests and provided a schedule for these requests related to the petition. The Staff considered the requested information in evaluating the petition. In addition, Entergy issued a licensee event report (LER) on June 17, 2004. An updated LER issued on September 29, 2004, summarized the root-cause analysis.

By letter dated May 28, 2004, the NRC informed the Petitioner that the request that the NRC issue an order to immediately stop all fuel movement at Vermont Yankee was moot since all fuel movement for the April 2004 refueling outage had been completed when the NRC received the request. During the May 5, 2004, conference call, the Petitioner stated he understood that all fuel movement had been completed for the April 2004 refueling outage but reaffirmed the petition's request to stop all fuel movement. He stated he understood that at the present time that would limit the request to the SFP. However, the Petitioner stated that he did not object to moving fuel in the SFP if the fuel movement was related to the inventory inspection. The Petitioner also stated he wanted an order for a 100% verification of the inventory of all the SNM in the SFP. The May 28, 2004, letter stated that the NRC would take action on the remaining request that Entergy perform an accurate and NRC-verified inventory of the location, disposition, and condition of all irradiated fuel, including fuel currently loaded in the reactor.

On July 13, 2004, Entergy informed the NRC that it had located the unaccounted-for fuel pieces in a cylindrical container (fuel storage liner) in the SFP. On July 17, 2004, Entergy confirmed that the two missing pieces had been found.

On September 10, 2004, the Petitioner supplemented his petition to request that the NRC require the Licensee to restore its documentation of the location and condition of all SNM at Vermont Yankee and that the NRC verify the accuracy and completeness of the documentation. In a September 22, 2004, conference call, the PRB discussed the supplemental letter with the Petitioner and his consultants. This teleconference was transcribed and the transcript is publicly available as a supplement to the petition. In this call, the Petitioner stated that the inspections to date to verify assembly location and number were “not of the veracity” to ensure that all the fuel rods or pieces have been correctly identified and accounted for. In addition, the Petitioner stated that the identification of the fuel rod pieces was questionable. On October 5, 2004, the NRC sent Entergy a letter requesting additional information. Entergy responded to this letter on November 19, 2004.

## II. DISCUSSION

On April 21, 2004, Entergy made a 10 C.F.R. § 50.72 notification that two short spent fuel rod pieces were not in their documented location in the SFP.

On April 22, 2004, the NRC initiated a special inspection to review the Licensee’s actions to locate the fuel and evaluate why the spent fuel pieces at Vermont Yankee were potentially missing. At the same time, Entergy began doing a comprehensive search of the SFP, verifying the core reload and the location of the remaining damaged spent fuel rod sections stored in the bundles, and reviewing records in an effort to find the missing pieces.

By letter dated May 21, 2004, the NRC asked the Licensee to document the various actions to account for all SNM in the SFP. This letter also asked the Licensee to document actions to locate the missing fuel pieces, verify the location of the remaining parts of the two spent fuel rods, and provide the results of these efforts to the NRC. In its June 8, 2004, response, Entergy stated it had verified: (1) that every spent fuel assembly was in its documented location in the SFP rack and (2) that the remaining parts of the fuel rods that were the source of the unaccounted-for fuel rod pieces were in their documented locations. Entergy’s LER dated June 17, 2004, provides additional details on Entergy’s physical inspection of the SFP.

Entergy stated that it had fully verified the documented position of 100% of fuel assemblies in the SFP by comparing the serial numbers on the fuel assemblies to the serial numbers recorded on the SFP map for each rack position. No discrepancies were noted. During the special inspection, the inspectors independently selected 219 of the rack positions shown on the SFP map and

compared the serial numbers of fuel assemblies shown in those positions on the inspection videotapes with the expected serial numbers. The inspectors identified no discrepancies in the samples reviewed. The inspectors verified the location of selected nonfuel SNM (i.e., fission detectors) by comparing the actual serial number of the item to the inventory sheet. The inspectors also verified the balance of nonfuel SNM inventory by matching the tamper-evident seal number to the number of the corresponding item on the inventory sheet. The Licensee's 100% inspection of fuel assemblies in the SFP and the NRC's special inspection gives the NRC a high level of confidence that all spent fuel assemblies at Vermont Yankee are accounted for and in their documented locations.

The Petitioner also requested that a core load verification be done. Core load verification (i.e., verifying the location and orientation of each individual fuel assembly in the reactor core) is performed at Vermont Yankee in accordance with Vermont Yankee Operating Procedure (OP) 1411, "Core Verification," after any reconfiguration of fuel assemblies within the core, including midcycle and refueling outages. In accordance with OP 1411, these verifications are performed visually with the aid of an underwater video camera. Thus Entergy personnel videotaped these verifications in addition to documenting the completion of verifications in OP 1411.

As part of the normal NRC refueling activity inspection at Vermont Yankee, the NRC inspectors discussed the core loading verification process with Entergy reactor engineering personnel. Every refueling outage, the Licensee performs a 100% inspection with 100% independent verification of the fuel assemblies in the reloaded core not only for location but for orientation. During refueling outage (RFO) 24, an initial verification of the core loading was done by a reactor engineer and a training instructor. The reactor engineer used an underwater video camera and a video monitor to read the serial number of each fuel assembly installed in the core, while the training instructor verified that the number read by the reactor engineer matched the corresponding fuel assembly number on the core loading map. Two additional individuals, a reactor engineer and a reactor engineering supervisor, performed independent verifications of the core loading using a similar method and a separate video monitor. All fuel assemblies were verified during this effort to be properly loaded and oriented.

As part of the normal NRC refueling activity inspection at Vermont Yankee, the inspectors did an independent review of 128 fuel assembly locations (34% of core load), comparing Entergy's "as left" core map to the core verification videotape made during the performance of OP 1411. Among the 128 fuel assemblies reviewed, the NRC inspection included 20 previously burned fuel assemblies which had not been in core during the last operating cycle and 4 fuel assemblies adjacent to the calculated "most reactive" control rod. The NRC inspection verified that the 128 bundles in the sample were in their documented locations. In addition, the NRC inspectors compared the pre-RFO 24-SFP map to

the as-left core map to verify that no leaking fuel assemblies had been reinserted into the core. The NRC inspectors did not identify any discrepancies in core fuel loading and did not find leaking fuel reinserted into the core. Based on the Licensee's 100% inspection and verification results and the results of the NRC's sample inspection, the NRC has a high level of confidence that the locations of the fuel assemblies in the reloaded core were accurately documented.

The Petitioner's supplement questioned whether the fuel rod pieces the Licensee found were correctly identified. To answer this question, the Staff requested information from the Licensee regarding the identification of the fuel rod pieces. Entergy did a document search and confirmed that the only fuel pieces or segments of fuel rods ever sent offsite went to General Electric (GE) at Vallecitos in 1979. Documentation also showed that the segments and pieces sent to GE at Vallecitos were not related to the pieces of two failed fuel rods in the liner. There are no records of shipments of fuel rod pieces or segments to any other facility. Entergy has no records of ever receiving any fuel pieces or segments from GE at Vallecitos or from any other facility. GE has confirmed that due to the destructive nature of the post-irradiation examination, any spent nuclear fuel from Vermont Yankee sent to GE for post-irradiation examination will be stored at Vallecitos until disposal. Therefore, there is reasonable evidence that the fuel rod pieces in the fuel storage liner are from Vermont Yankee.

After the discovery of the two spent fuel rod pieces, the NRC special inspection focused on why Entergy concluded that the two spent fuel rod pieces were in fact the same two spent fuel rod pieces that had been misplaced. Entergy verified that the two spent fuel rod pieces were the unaccounted spent fuel rod pieces by measuring radiation levels and estimating the length and diameter of the pieces. Entergy reasoned as follows:

- The lengths of the two found spent fuel rod pieces were consistent with the lengths of the two misplaced spent fuel rod pieces, based on visual comparison with items of known length.
- Radiation measurements inside and outside the fuel storage liner were consistent with the expected radiation levels based on Entergy's detailed radiological characterization of the two misplaced spent fuel rod pieces.
- The diameters of the two spent fuel rod pieces were consistent with the diameters of the original fuel rods based on boroscope observation.
- Only two spent fuel rod pieces were misplaced. Two spent fuel rod pieces were recovered. No other record discrepancies indicated any other unaccounted for SNM.
- The fuel storage liner discovered on July 13, 2004, was consistent with the 1980 log entries and other documents referring to a fuel storage liner.

- Entergy interviewed a former employee who had been involved in the transfer of the two spent fuel rod pieces from the fuel storage bucket to the fuel storage liner on January 21, 1980. While the individual did not specifically recall the transfer activity, his description of the fuel storage liner used to store broken spent fuel rod pieces matched the fuel storage liner discovered on July 13, 2004.
- A GE invoice dated August 9, 1979, indicated that a fuel storage liner was shipped to Vermont Yankee to contain broken fuel pins. This invoice indicated the intent to use the fuel storage liner to contain broken spent fuel rod pieces. The first spent fuel rod was broken on April 23, 1979. This invoice and documents provided by GE were consistent with the fuel storage liner found in the SFP by Entergy and the 1980 SNM transfer form.

Using the videotape records, the NRC inspectors compared the lengths of the two spent fuel rod pieces to the known distance between reference markings on a probe and independently confirmed that one of the two spent fuel rod pieces in the fuel storage liner was 9 inches long and the other 17 inches. The NRC inspectors found that Entergy's radiological characterization of the two spent fuel rod pieces was acceptable. The NRC inspectors determined that Entergy had sufficient supporting information to conclude that the two spent fuel rod pieces found were the two misplaced spent fuel rod pieces. On this basis, the NRC Staff is confident in Entergy's conclusion that the fuel storage liner opened in the SFP on July 13, 2004, contained the two spent fuel rod pieces described in the records.

The Petitioner's supplement also asserted that the inventory of assemblies was not sufficiently rigorous. Fuel rods were routinely moved during fuel reconstitution efforts and fuel assembly inspections. However, the Licensee confirmed that after fuel assembly inspections, each fuel rod was typically returned to the location from which it was removed. Procedure OP-1403, "Fuel Bundle Non-Destructive Testing and Reconstitution," Rev. 16, describes the methods used for examining fuel assemblies and individual rods and requires that records be created for accountability of fuel rods moved. The NRC inspectors interviewed Entergy personnel who also described in detail how they tracked changes in fuel assembly configurations as a result of the movement of individual fuel rods, for example, during fuel assembly reconstitutions. When a rod was removed from an assembly, the action was recorded on the notebook page for that assembly along with where the rod was moved. An exchange of one rod for another was also recorded on the notebook page. This created a record that enabled tracking of the movements of individual fuel rods among assemblies. When all such changes to an assembly had been completed during a manipulation, the current SNM inventory of that reconstituted fuel assembly was adjusted to reflect the additions and removals of the fuel rods. Thus, every fuel rod moved from

one assembly to another was tracked on a fuel rod transfer form and inventory documentation so that every fuel rod could be traced back to where it came from.

Entergy reviewed the records of all individual rod movements within the SFP at the request of the NRC's SNM investigation team and identified no discrepancies. Entergy selected seven fuel assemblies and did a physical inspection and verification of vacant fuel rod positions, broken fuel rods, and full-length fuel rods that had been moved about 20 years ago. Entergy compared the results with its fuel records and identified no discrepancies. The seven assemblies were selected on the basis that they contained fuel rods which had been manipulated and were therefore more likely to have been misplaced. The seven assemblies consisted of four assemblies that were associated with the two failed fuel rods in question, one assembly associated with shipment of fuel pieces to GE Vallecitos, and two fuel cages (i.e., containers) for storing rods and pieces of rods. The fuel rods and pieces came from the reconstitution efforts during the early 1970s. The fuel inventory has accounted for all rods and pieces in the assemblies and the inventory has been properly documented. The inspectors reviewed a sample of these records and found that each rod movement in the sample reviewed was properly recorded in the affected fuel assembly.

Therefore, on the basis of the inventory performed by Entergy and verified by a NRC's special inspection and routine inspections the NRC has concluded that Entergy is in full compliance with regulatory requirements to account for all SNM in its possession.

Entergy's investigation required the movement of seven fuel bundles. Entergy has not moved any spent fuel in the SFP not related to this investigation since April 21, 2004. Entergy also moved a fuel storage liner in the SFP. The liner was found to contain the two missing fuel pieces.

### III. CONCLUSION

The NRC Staff has reviewed the basis for the Petitioner's requested actions. The Petitioner's request to stop all fuel movement is moot since all fuel movement for the April 2004 refueling outage had been completed before NRC received the petition. As noted above, seven fuel assemblies and the fuel storage liner with the two rod pieces were moved as part of the Licensee's investigation. Based on the licensee's documented inventory of fuel assemblies and their locations, the location of the individual rods, the successful discovery of the two fuel rod pieces in the SFP, and the core verifications, the NRC has concluded that as of July 13, 2004, Entergy has been in full compliance with regulatory requirements to account for all SNM in its possession. Since the Licensee has restored its inventory of SNM at the Vermont Yankee site, there is no need for the NRC to prohibit future fuel movement. Therefore, the Petitioner's requested actions have, in effect, been

granted. The Licensee's actions were performed voluntarily, obviating the need for an order. The Staff has concluded no further action is necessary to address the petition. Consequently, the NRC denies the supplemented request for a more detailed inventory of the SNM in the SFP.

The Petitioner also claimed to have no confidence that Entergy did not put leaking fuel rods or suspected leaking fuel assemblies back into the reactor core during the last refueling outage. The NRC inspectors verified that no leaking fuel assemblies had been reloaded in the reactor core. Although the NRC has concluded that Entergy is now in compliance with regulatory requirements to account for all SNM, in the special inspection report issued on December 2, 2004, the inspectors identified an apparent violation of 10 C.F.R. § 74.19, "Material Control and Accounting of Special Nuclear Material — Recordkeeping," related to the two spent fuel rod pieces. The NRC is considering escalated enforcement action for this finding.

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 10th day of March 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**

<b>In the Matter of</b>	<b>Docket No. 52-007-ESP</b>
<b>EXELON GENERATION COMPANY, LLC</b> <b>(Early Site Permit for Clinton</b> <b>ESP Site)</b>	
<b>In the Matter of</b>	<b>Docket No. 52-008-ESP</b>
<b>DOMINION NUCLEAR NORTH ANNA, LLC</b> <b>(Early Site Permit for North Anna</b> <b>ESP Site)</b>	
<b>In the Matter of</b>	<b>Docket No. 52-009-ESP</b>
<b>SYSTEM ENERGY RESOURCES, INC.</b> <b>(Early Site Permit for Grand Gulf</b> <b>ESP Site)</b>	
<b>In the Matter of</b>	<b>Docket No. 70-3103-ML</b>
<b>LOUISIANA ENERGY SERVICES, L.P.</b> <b>(National Enrichment Facility)</b>	
<b>In the Matter of</b>	<b>Docket No. 70-7004</b>
<b>USEC INC.</b> <b>(American Centrifuge Plant)</b>	<b>April 20, 2005</b>



## **RULES OF PRACTICE: CERTIFIED QUESTIONS**

The Commission's "customary practice" is to accept Board-certified questions. *See, e.g., 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 March 18, 2005, the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel issued a Memorandum, LBP-05-7, 61 NRC 188, certifying certain questions to the Commission regarding "mandatory hearing" requirements in NRC enabling legislation and in NRC regulations. The Chief Judge's Memorandum addressed the first four proceedings captioned above. On March 28th, USEC (the Applicant in the fifth proceeding) filed with the Commission a motion for leave to submit its views on the certified questions. The Commission hereby grants review of those questions. In doing so, we follow our "customary practice" of accepting Board-certified questions. *See, e.g., 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).

USEC argues that the certified questions are as relevant to its own application to construct and operate a uranium enrichment facility as they are to the Louisiana Energy Services' pending application (captioned above). According to USEC, both applications were filed under the same statutory and regulatory provisions, both concern the same kind of facility, both are subject to mandatory hearings, and the two proceedings' "Notice[s] of Hearing and Order" are substantially identical.

The Commission agrees that USEC should have the opportunity to present its views on the certified questions. The Commission therefore grants USEC's motion and establishes the following filing schedule for both USEC's brief and any response briefs. No later than 14 days after issuance of this Memorandum and Order, USEC may file with the Commission a brief setting forth its views on the certified questions. USEC's brief may not exceed twenty pages, exclusive of the tables of contents and authorities (both of which we require). No later than 14 days after USEC files its brief, the parties in the remaining four above-captioned proceedings (exclusive of the NRC Staff) and the petitioners to intervene in the *USEC* proceeding may file response briefs with the Commission. Response briefs may address both USEC's brief and the points the Chief Judge raised in LBP-05-7, but need not repeat arguments already raised in the records before the various

Boards in these proceedings. Each response brief may not exceed twenty pages, exclusive of the tables of contents and authorities (both of which we require).

For reasons unique to these certified questions, we establish a later filing deadline for the NRC Staff's reply brief. The Chief Judge reviewed, *inter alia*, the agency's hearing notices in the first four above-captioned cases, the Staff's various briefs to the Board regarding the certified questions, and the procedural regulations at issue. But he repeatedly indicated in LBP-05-7 that these various documents, or sets of documents, appear internally inconsistent as to the certified questions. To provide the Staff a sufficient opportunity to address these issues and the certified questions fully and to respond to any suggestions and arguments by other parties, we grant the Staff an additional week — until 7 days after all other response briefs are filed — to file its response brief.

The Staff's brief should address LBP-05-7, the certified questions, USEC's brief, and all other response briefs. Because we are establishing a particularly broad scope for the Staff's response brief, we impose upon it no page limit. As with the other parties and participants, we require the Staff to include tables of contents and authorities. Finally, though we are *permitting* all other entities to file their various briefs, we *require* that the Staff file its response brief.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 20th day April 2005.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

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

**In the Matter of**

**Docket Nos. 50-413-OLA  
50-414-OLA**

**DUKE ENERGY CORPORATION  
(Catawba Nuclear Station, Units 1  
and 2)**

**April 21, 2005**

**MEMORANDUM AND ORDER**

This proceeding arises from Duke Energy Corporation's application for a license amendment to authorize the use of four lead test assemblies of mixed oxide (MOX) fuel in one of its Catawba nuclear reactors. On March 10, 2005, the Licensing Board issued its final partial initial decision<sup>1</sup> on the security contention brought by the Blue Ridge Environmental Defense League (BREDL) to challenge certain exemptions Duke Energy Corporation sought for its Catawba facility during testing of MOX assemblies. Because it contains safeguards information, the order has not been made public. The Board did, however, issue a public notice of the decision, indicating that, *subject to certain conditions*, Duke had met its burden to show that its requested exemptions from the requirements of 10 C.F.R. Parts 11 and 73 are appropriate and that its physical protection system will "provide high assurance that activities involving the MOX fuel will not be

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<sup>1</sup> See LBP-05-10, 61 NRC 241 (2005) (public redacted version).

inimical to the common defense and security or constitute an unreasonable risk to the public health and safety.’<sup>2</sup>

The March 10 order was the Board’s final order in this case, and none of the parties sought review of it. Nevertheless, the Commission has decided to review the Board’s order pursuant to 10 C.F.R. § 2.786(a).<sup>3</sup> Before proceeding further, the Commission specifically requests the parties to brief the issue of the necessity of the conditions the Board imposed for purposes of receipt of the MOX lead test assemblies.

The briefs should not exceed twenty-five pages and should be filed for receipt by the Commission by close of business on May 2, 2005. Parties may file reply briefs, limited to ten pages and consisting only of rebuttal, for receipt by the Commission by May 9, 2005. The parties are reminded of the importance of compliance with the procedures regarding submission of safeguards information.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 21st day of April 2005.

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<sup>2</sup> See “Notice of Final Partial Initial Decision (Issues Relating to BREDL Security Contention 5)” (Mar. 10, 2005).

<sup>3</sup> The Commission’s new adjudicatory rules 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).

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Ann Marshall Young, Chair**  
**Anthony J. Baratta**  
**Thomas S. Elleman**

**In the Matter of**

**Docket Nos. 50-413-OLA**  
**50-414-OLA**  
**(ASLBP No. 03-815-03-OLA)**

**DUKE ENERGY CORPORATION**  
**(Catawba Nuclear Station, Units 1**  
**and 2)**

**April 18, 2005\***

In this Final Partial Initial Decision concerning Duke Energy Corporation's application to amend the operating license for its Catawba Nuclear Station to allow the use of four mixed oxide (MOX) fuel lead test assemblies as part of a U.S.–Russian Federation nuclear nonproliferation program, the Licensing Board finds, subject to its fulfilment of certain conditions, that Duke met its burden of showing by a preponderance of the evidence that requested exemptions from requirements of 10 C.F.R. Parts 11 and 73 are appropriate under 10 C.F.R. §§ 11.9 and 73.5, and that its physical protection system, with the requested exemptions, will, during the time MOX fuel at Catawba would be subject to certain security requirements as strategic special nuclear material (SSNM), provide high assurance that activities involving the MOX fuel will not be inimical to the common defense and security or constitute an unreasonable risk to the public health and safety, as required at 10 C.F.R. § 73.20(a).

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\*Original issue date March 10, 2005.

#### **DISCOVERY: CONSTRUCTION OF DISCOVERY RULES**

While the Federal Rules of Civil Procedure are not themselves directly applicable to practice before the Commission, judicial interpretations of a federal rule can serve as guidance for interpreting a similar or analogous NRC discovery rule.

#### **EVIDENCE: ADMISSIBILITY OF EVIDENCE**

Under Rule 32(a)(2) of the Federal Rules of Civil Procedure, a deposition may not be excluded merely because a party is available to testify in person; the rule permits a party to introduce as part of its substantive proof the deposition of an adversary party, whether or not the adversary is available to testify or has testified. The determination of who is a “managing agent” of a corporate party, whose discovery deposition may be used by an adversary, is made on a case-by-case, pragmatic basis, considering such factors as the corporate employee’s rank, title, supervisory authority, power to exercise judgment and discretion, functions and duties respecting matters involved in the litigation, duty to testify at management’s direction in response to adversary party demand, an identity of interests with those of corporate management, and whether there is any person in higher authority who could possess the information sought.

#### **EVIDENCE: ADMISSIBILITY OF EVIDENCE**

The Technical Specialist responsible for overseeing the plant’s armed response program, formulating defensive strategy, placement of defensive positions and delay barriers, target set development, ensuring that regulatory requirements are met, planning and executing tabletop drills and force-on-force exercises, and coordinating with local and state law enforcement agencies is found to be “managing agent” for the purpose of giving testimony regarding security matters at Catawba, and thus deposition is permitted to be used by the adversary party as substantive evidence.

#### **LICENSE AMENDMENTS: GOVERNING LEGAL STANDARDS**

Under 10 C.F.R. § 50.90, whenever a holder of a license wishes to amend the license, including technical specifications in the license, an application for amendment must be filed, fully describing the changes desired.

#### **LICENSE AMENDMENTS: GOVERNING LEGAL STANDARDS**

Under 10 C.F.R. § 50.92(a), determinations on whether to grant an applied-for license amendment are to be guided by the considerations that govern the issuance

of initial licenses or construction permits to the extent applicable and appropriate. Both the common standards for licenses and construction permits in 10 C.F.R. § 50.40(a) and those specifically for issuance of operating licenses in 10 C.F.R. § 50.57(a)(3) provide that there must be “reasonable assurance” that the activities at issue will not endanger the health and safety of the public.

#### **LICENSE AMENDMENTS: GOVERNING LEGAL STANDARDS**

A licensee that possesses or uses formula quantities of SSNM is required not only to demonstrate “reasonable assurance” of safety, but also, under 10 C.F.R. § 73.20(a), to have a physical protection system with an objective of providing “*high assurance* that activities involving special nuclear material are not inimical to the common defense and security, and do not constitute an unreasonable risk to the public health and safety.” The physical protection system for possession of SSNM must also, under section 73.20(a), be “designed to protect against the design basis threats [DBTs] of theft or diversion of [SSNM] and radiological sabotage as stated in § 73.1(a).”

#### **REGULATIONS: STANDARDS FOR EXEMPTIONS**

Regarding exemptions sought from certain regulatory provisions, 10 C.F.R. §§ 11.9 and 73.5 provide, respectively, that exemptions from the requirements of 10 C.F.R. Part 11 may be granted if they are authorized by law and will not constitute an undue risk to the common defense and security, and that exemptions from the requirements of Part 73 may be granted if they are authorized by law, will not endanger life or property or the common defense and security, and are otherwise in the public interest.

#### **REGULATIONS: INTERPRETATION**

Where the meaning of a regulation is clear and obvious, the regulatory language is conclusive and must be enforced as written. The plainness or ambiguity of language is determined by reference to the language itself, the specific context in which that language is used, and the broader context of the statute or regulation as a whole.

#### **REGULATIONS: INTERPRETATION**

Regarding the word, “or,” canons of construction ordinarily suggest that terms connected by a disjunctive be given separate meanings, unless the context dictates otherwise. Regarding the language, “small group with . . . the ability to

operate as two *or* more teams,” found in 10 C.F.R. § 73.1(a)(2)(i)(F), the context in this case, including the stated purpose of section 73.1(a), is found to “dictate otherwise.” Thus a licensee covered by the rule is required to be prepared to defend itself against an adversary group with the ability to operate in alternative configurations: in two teams or in more than two teams.

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**FINAL PARTIAL INITIAL DECISION —  
PUBLIC REDACTED VERSION  
(Issues Relating to BREDL Security Contention 5)**

**I. INTRODUCTION**

This proceeding involves Duke Energy Corporation’s (Duke’s) application to amend the operating license for its Catawba Nuclear Station to allow the use of four mixed oxide (MOX) fuel lead test assemblies (LTAs) at the station. In connection with this application, Duke seeks exemption from certain NRC security regulations. Petitioner Blue Ridge Environmental Defense League (BREDL) has challenged these exemptions in a contention earlier admitted for litigation in this proceeding. After considering the parties’ evidence and argument on the matters at issue, we find, subject to Duke’s fulfillment of certain conditions described below, that Duke has met its burden of showing by a preponderance of the evidence that its requested exemptions from the requirements of 10 C.F.R. Parts 11 and 73 are appropriate under 10 C.F.R. §§ 11.9 and 73.5, and that its physical protection system, with the requested exemptions, will, during the time MOX fuel at Catawba would be subject to certain security requirements as strategic special nuclear material (SSNM), provide high assurance that activities involving the MOX fuel will not be inimical to the common defense and security or constitute an unreasonable risk to the public health and safety, as required by 10 C.F.R. § 73.20(a).<sup>1</sup>

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<sup>1</sup> As discussed in section IV of the Decision, section 73.20 and other sections of 10 C.F.R. Part 73 concern various requirements for licensees that, among other things, “possess[ ] . . . formula quantities  
(Continued)

We set forth the facts, reasoning, and legal analysis on which this ruling is based, and the conditions to which it is subject, in the findings of fact and conclusions of law found in sections V and VI of this Decision. We note first, however, certain procedural matters, beginning with the fact that the original version of this Final Partial Initial Decision was issued on March 10, 2005, and was sealed as Safeguards Information, as stated in a public Notice of Final Partial Initial Decision issued the same date, because it, in part, specifically identifies Duke's "detailed . . . security measures for the physical protection of special nuclear material" (*see* definition in 10 C.F.R. § 73.2 and note 12, below). This document is a redacted version of the original, which we issue in a publicly available form, after consultation with the parties and with Mr. Francis Young, appointed by the Commission, by Order dated August 2, 2004, to advise and assist the Licensing Board with respect to security classification of information and the safeguards to be observed in this proceeding.

We turn next to a discussion of the background and procedural history of this proceeding, and to our rulings on three pending matters, two concerning evidentiary questions remaining at the conclusion of the hearing on Security Contention 5, and one involving a BREDL motion to reopen the record in the proceeding in order to consider certain additional evidence.

## II. BACKGROUND AND PROCEDURAL HISTORY

Duke filed its application, or license amendment request (LAR), in February 2003, seeking to amend the license for the Catawba plant, which is located south of Charlotte, North Carolina, in York County, South Carolina. Duke requests in the LAR to modify certain technical specifications (TSS) to enable the use of four MOX fuel lead test assemblies at Catawba, and also requests exemption from several NRC regulatory requirements in connection with such proposed use. The regulations from which exemption is sought deal with worker clearances, access and search provisions, physical barriers, and tactical response team requirements; these are addressed in some detail in sections IV through VI, below.

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of [SSNM]," and this Decision involves questions of whether Duke should be exempted from certain of these requirements. Section 73.2 defines "[s]trategic special nuclear material" as "uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope), uranium-233, or plutonium"; and "[f]ormula quantity" as "strategic special nuclear material in any combination in a quantity of 5,000 grams or more computed by the formula, grams = (grams contained U-235) + 2.5 (grams U-233 + grams plutonium)." The latter definition concludes with the statement, "This class of material is sometimes referred to as a *Category I* quantity of material" (emphasis added), using a term that also arises in our discussion of the factual and legal issues in the security-related portion of this proceeding.

As we have previously noted,<sup>2</sup> Duke's application is made as one part of a United States–Russian Federation nuclear nonproliferation program, in which it is proposed to dispose of surplus plutonium from nuclear weapons by converting it into MOX fuel (containing a mixture of plutonium and uranium oxides, with plutonium providing the primary fissile isotope) to be used in nuclear reactors.<sup>3</sup> Duke is part of a consortium, Duke Cogema Stone & Webster (DCS), that has contracted with the Department of Energy (DOE) to perform various functions associated with this program.<sup>4</sup>

The assemblies currently at issue are being manufactured in France under the direction of AREVA,<sup>5</sup> and will, assuming all necessary conditions are met, ultimately be delivered by truck to Catawba by DOE. Duke's plans call for the assemblies to be irradiated for a minimum of two cycles, in order to test the acceptability of the fuel assembly design, the ability of the Duke and AREVA models to predict fuel assembly performance, and the applicability of the existing European database on MOX fuel performance to Duke's use of MOX fuel.<sup>6</sup> If successful, the LTA irradiation would support the potential future use of larger, "batch" quantities of MOX fuel at either the Catawba or McGuire plant, which would require another license amendment application and associated licensing proceeding.<sup>7</sup>

In response to a July 2003 *Federal Register* publication of notice of opportunity for hearing, Petitioners BREDL and Nuclear Information and Resource Service (NIRS) in August 2003 submitted petitions to intervene and requests for hearing regarding the current LAR.<sup>8</sup> These were supplemented in October 2003,

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<sup>2</sup> See LBP-04-32, 60 NRC 713, 715 (2004).

<sup>3</sup> See Tr. 3874; 68 Fed. Reg. 44,107 (July 25, 2003); Letter from M.S. Tuckman, Executive Vice President, Duke Power, to NRC (Feb. 27, 2003), License Amendment Request, Attachment 3 at 3-2 n.1, ADAMS Accession No. ML03076-734 [hereinafter LAR]. Duke's original LAR involved both the McGuire Nuclear Station, Units 1 and 2, and the Catawba Nuclear Station, Units 1 and 2. In September 2003, Duke revised the LAR to restrict the request to the Catawba facility. Letter from M.S. Tuckman to NRC (Sept. 23, 2003), ADAMS Accession No. ML032750033. See LBP-04-4, 59 NRC 129 (2004); LBP-04-10, 59 NRC 296 (2004), for more detailed information about Duke's application.

<sup>4</sup> LAR, Attachment 3 at 3-2.

<sup>5</sup> AREVA is the trade name of the Société des Participations du Commissariat à l'Énergie Atomique, an organization consisting of several businesses including Framatome Advanced Nuclear Power (ANP), Siemens, Cogema, and AREVA T&D. AREVA Web site at [www.areva.com](http://www.areva.com).

<sup>6</sup> Tr. 2112.

<sup>7</sup> Tr. 2111. We note also that, according to the LAR, the fuel for any such batch use would be fabricated by DCS in a facility planned to be located in South Carolina, assuming approval of the license application for the facility. LAR, Attachment 3 at 3-2.

<sup>8</sup> See 68 Fed. Reg. 44,107; [BREDL]'s Hearing Request and Petition To Intervene (Aug. 25, 2003); Nuclear Information & Resource Service's [NIRS] Request for Hearing and Petition To Intervene (Aug. 21, 2003).

December 2003, and March 2004 by contentions raising specific areas of dispute regarding the LAR.<sup>9</sup> After hearing oral argument on BREDL's safety and environmental contentions in December 2003, and on its security-related contentions in March 2004,<sup>10</sup> the Licensing Board granted BREDL's request for hearing and, in Memoranda and Orders dated March 5 and April 12, 2004, admitted one safety-related and two environmental contentions, and one security-related contention, respectively.<sup>11</sup>

Starting prior to the filing or admission of any BREDL security contention and continuing since that time, the Licensing Board and parties have engaged, on a fairly intensive basis, in numerous activities involving sensitive information, including disputes on the relevance of particular pieces of such information, and access to such information. Most of the information in question is "Safeguards Information" (SGI), which is defined in 10 C.F.R. § 73.2 as follows:

*Safeguards Information* means information not otherwise classified as National Security Information or Restricted Data which specifically identifies a licensee's or applicant's detailed, (1) security measures for the physical protection of special nuclear material, or (2) security measures for the physical protection and location of certain plant equipment vital to the safety of production or utilization facilities.<sup>12</sup>

A number of closed sessions have been held to address issues related to such information, and the Licensing Board has issued a number of rulings on related discovery and other disputes, involving BREDL's "need-to-know" and access

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<sup>9</sup> [BREDL]'s Supplemental Petition To Intervene (Oct. 21, 2003) [hereinafter BREDL Contentions]; Contentions of [NIRS] (Oct. 21, 2003); [BREDL]'s Second Supplemental Petition To Intervene (Dec. 2, 2003); [BREDL]'s Contentions on Duke's Security Plan Submittal (Mar. 3, 2004) (SGI).

<sup>10</sup> Tr. 71-576 (Dec. 3-4, 2003); Tr. 1263-1513 (Mar. 18, 2004) (Safeguards Information [SGI]).

<sup>11</sup> LBP-04-4, 59 NRC 129 (2004); LBP-04-10, 59 NRC 296 (2004) (redacted public version of April 12, 2004, sealed Safeguards Memorandum and Order, issued May 28, 2004). None of NIRS's contentions were admitted. Of the three safety-related and environmental contentions admitted in LBP-04-4, the Board dismissed one in LBP-04-7, 59 NRC 259 (2004), and BREDL withdrew another, *see* Order (Regarding Proposed Redacted Memorandum & Order, and Proposed Schedule Changes) (May 25, 2004) (unpublished), leaving one that was litigated separately from those issues relating to Security Contention 5 that were litigated more recently and are addressed herein. *See also* CLI-04-19, 60 NRC 5 (2004).

<sup>12</sup> *See also* 10 C.F.R. § 73.21. As noted at the beginning of this Decision, because the Initial Decision addresses information that deals with and identifies in various ways Duke's "detailed . . . security measures for the physical protection of [the MOX fuel as well as] . . . for the physical protection and location of certain plant equipment vital to the safety" of the Catawba plant, the original version of it is protected as SGI itself. In order, however, to provide as much information as possible to the public, within the limits of relevant regulatory security requirements, we herein issue this redacted public version of the Decision.

to various pieces of sensitive information.<sup>13</sup> Some of these rulings have followed initial need-to-know determinations by the Staff and Duke, regarding documents held by each, and some Board rulings have been appealed to the Commission, leading to the issuance of several Commission Memoranda and Orders.<sup>14</sup> We refer in passing herein to some of these, as relevant in our analysis of the facts and law regarding the security-related portion of this proceeding.

Evidentiary hearings were held on July 14-15, 2004,<sup>15</sup> and January 11-14, 2005,<sup>16</sup> respectively, on the only safety contention then remaining in the proceeding and the only security contention admitted in the proceeding. Subsequent to the July hearing, the parties' submission of proposed findings of fact and conclusions of law and proposed reply findings,<sup>17</sup> and various other activities

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<sup>13</sup> See, e.g., Memorandum and Order (Protective Order Governing Duke Energy Corporation's September 15, 2003 Security Plan Submittal) (Dec. 15, 2003); Memorandum (Providing Notice of Granting BREDL Motion for Need To Know Determination and Extension of Deadline for Filing Security-Related Contentions) (Jan 29, 2004); Memorandum and Order (Ruling on BREDL Motion Regarding Staff February 6, 2004, Meeting with Duke Energy and Request for Need To Know Determination) (Feb. 4, 2004); Memorandum and Order (Ruling on BREDL Motion for Need To Know Determination Regarding Classified Documents) (Feb. 17, 2004); Memorandum and Order (Setting Schedule for Discovery and Hearing on Security-Related Matters) (Apr. 28, 2004); Order (Ruling on [Duke] Objection to BREDL Document Production Request No. 2 Regarding BREDL Security Contention) (June 28, 2004); LBP-04-13, 60 NRC 33 (2004); Memorandum and Order (Suspending Discovery Proceedings Pending Further Commission Guidance) (July 28, 2004); Memorandum and Order (Confirming August 10, 2004, Bench Ruling Finding Need To Know and Order Provision of Documents Sought by Intervenor in Discovery) (Aug. 13, 2004); LBP-04-21, 60 NRC 357 (2004); Memorandum and Order (Ruling on Objections of Duke and Staff to BREDL Discovery Requests) (Oct. 6, 2004); Memorandum and Order (Ruling on Redactions to Documents 67 and 68) (Oct. 6, 2004); Memorandum and Order (Confirming Sept. 28, 2004, Bench Ruling Upholding Staff Need-To-Know Determination on Access to Security Plan Revision) (Oct. 15, 2004); Memorandum and Order (Confirming Matters Addressed and Ruled on at Oct. 25, 2004, Closed Session) (Nov. 5, 2004); Memorandum and Order (Ruling on BREDL Access to NRC Guidance Document) (Nov. 5, 2004); Memorandum and Order (Ruling on BREDL Need-To-Know Appeal Regarding Lessons Learned Report) (Nov. 22, 2004); Memorandum and Order (Granting in Part Motion for Interim Discovery Measures) (Nov. 23, 2004); Memorandum and Order (Confirming Actions Taken at November 23, 2004, Closed Session) (Nov. 24, 2004); Memorandum and Order (Ruling on BREDL Motion To Amend Protective Order) (Dec. 17, 2004); Memorandum and Order (Need-To-Know Ruling on SECY Document) (Dec. 17, 2004).

<sup>14</sup> See CLI-04-6, 59 NRC 62 (2004); CLI-04-19, 60 NRC 5 (2004); CLI-04-21, 60 NRC 21 (2004); CLI-04-29, 60 NRC 417 (2004); CLI-04-37, 60 NRC 646 (2004); CLI-05-2, 61 NRC 1 (2005).

<sup>15</sup> Tr. 2072-2708.

<sup>16</sup> Tr. 3837-5364 (SGI); all future references to transcript pages within these cited page numbers are SGI even if not specifically so noted.)

<sup>17</sup> [Duke]'s Proposed Findings of Fact and Conclusions of Law Regarding Contention I (Aug. 6, 2004); [BREDL]'s Proposed Findings of Fact and Conclusions of Law Regarding BREDL Contention I (Aug. 6, 2004); NRC Staff's Proposed Findings of Fact and Conclusions of Law Concerning BREDL

*(Continued)*

related to the safety portion of this proceeding,<sup>18</sup> the Licensing Board issued a Partial Initial Decision, finding that Duke had met its burden of persuasion regarding the one safety contention.<sup>19</sup> Meanwhile, on December 17 and 20, 2004, the parties filed their prefiled direct testimony on BREDL Security Contention 5,<sup>20</sup> and on January 7, 2005, filed their prefiled rebuttal testimony.<sup>21</sup> Following the January hearing, which was closed to the public because it involved SGI, the parties submitted proposed findings of fact and conclusions of law, and proposed reply findings, respectively, on January 28 and February 4, 2005.<sup>22</sup> In addition, on February 7, BREDL filed a Motion To Re-open the Record on Security Contention 5, responses to which were filed February 15, 2005.<sup>23</sup>

Finally, we note that on March 3 the NRC, through Staff and based on NRC Staff findings, issued Duke's requested license amendment and exemption from regulations, and so notified the parties and licensing board in a memorandum

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Contention I (Aug. 6, 2004); [Duke]'s Reply Findings of Fact and Conclusions of Law Regarding Contention I (Aug. 31, 2004); [BREDL]'s Proposed Reply Findings of Fact and Conclusions of Law Regarding BREDL Contention I (Aug. 31, 2004); NRC Staff's Reply Findings of Fact and Conclusions of Law Concerning BREDL Contention I (Aug. 6, 2004).

<sup>18</sup> See LBP-04-32, 60 NRC 713, 717-18 (2004).

<sup>19</sup> LBP-04-32, 60 NRC 713 (2004).

<sup>20</sup> Testimony of Steven P. Nesbit, Glenn A. Copp, III, William T. Byers, III, Howard B. Williams, and Rita A. Edwards on Behalf of [Duke] on Security Contention 5 (Dec. 17, 2004) (SGI); NRC Staff Testimony of Sherri L. Cross, Albert G. Barrett, Michael R. Burrell, R. John Vanden Berghe, John B. McKirgan, and William Troskoski (Dec. 17, 2004) (SGI); Prefiled Written Testimony of Dr. Edwin S. Lyman Regarding [BREDL] Security Contention 5 (Dec. 20, 2004) (SGI).

<sup>21</sup> Rebuttal Testimony of Steven P. Nesbit, Glenn A. Copp, III, William T. Byers, III, Howard B. Williams, and Rita A. Edwards on Behalf of [Duke] on Security Contention 5 (Jan. 7, 2005) (SGI); Prefiled Written Rebuttal Testimony of Dr. Edwin S. Lyman Regarding [BREDL] Security Contention 5 (Jan. 7, 2005) (SGI); NRC Staff Rebuttal Testimony of Sherri L. Cross, Albert G. Barrett, Michael R. Burrell, R. John Vanden Berghe, John B. McKirgan, and William Troskoski (Jan. 7, 2005) (SGI).

<sup>22</sup> [Duke]'s Proposed Findings of Fact and Conclusions of Law Regarding Security Contention 5 (Feb. 1, 2005) (SGI) (hereinafter Duke Findings); [BREDL]'s Proposed Findings of Fact and Conclusions of Law Regarding Security Contention 5 (Feb. 1, 2005) (SGI) (hereinafter BREDL Findings); NRC Staff's Proposed Findings of Fact and Conclusions of Law Concerning Security Contention 5 (Feb. 1, 2005) (SGI) (hereinafter Staff Findings); [Duke] Reply Findings of Fact and Conclusions of Law Regarding Security Contention 5 (Feb. 7, 2005) (SGI) (hereinafter Duke Reply Findings); [BREDL] Reply Findings of Fact and Conclusions of Law Regarding Security Contention 5 (Feb. 7, 2005) (SGI) (hereinafter BREDL Reply Findings); NRC Staff's Reply Findings of Fact and Conclusions of Law Concerning Security Contention 5 (Feb. 7, 2005) (SGI) (hereinafter Staff Reply Findings).

<sup>23</sup> [BREDL] Motion To Re-Open the Record on Security Contention 5 (Feb. 7, 2004) (SGI) [hereinafter BREDL Motion]; NRC Staff Response in Opposition to [BREDL] Motion To Re-Open the Record on Security Contention 5 (Feb. 15, 2005) (SGI) [hereinafter Staff Reply]; [Duke]'s Response to the [BREDL]'s Motion To Re-Open the Record on Security Contention 5 (Feb. 15, 2005) [hereinafter Duke Reply].

dated March 4, 2005. BREDL has petitioned the Commission for an expedited review of these actions.<sup>24</sup>

### III. RULINGS ON PENDING MATTERS

#### A. Deposition of Howard Williams

During the January 11-14 evidentiary hearing the Board took under advisement the Staff's objection to the admission into evidence of the deposition of Duke security specialist Howard Williams, which was proffered by BREDL.<sup>25</sup> Citing the Federal Rules of Evidence, Staff counsel asserts the deposition should be excluded as hearsay, given the presence of Mr. Williams at the hearing to testify.<sup>26</sup> Duke counsel objected to admission of the entire document, but has indicated no objection to the admission of those parts of the deposition that were referenced by BREDL expert Dr. Edwin Lyman, or that would give context to his testimony.<sup>27</sup> BREDL counsel has clarified that it wishes to have admitted only those pages that Dr. Lyman cited in his testimony, along with prior and subsequent pages in order to ensure that appropriate context is provided.<sup>28</sup> This would result in pages 32-34, 38-40, 53-55, 66-68, and 83-114 being admitted into evidence. No specific objection to the admission of these enumerated pages has been posed by either Duke or the Staff. In order, however, to address the Staff's broader objection (which has not been withdrawn), we have considered it in the context of Rule 32 of the Federal Rules of Civil Procedure, which deals with the use of depositions at trial.

While the Federal Rules are not themselves directly applicable to practice before the Commission, judicial interpretations of a federal rule can serve as guidance for interpreting a similar or analogous NRC discovery rule.<sup>29</sup> We find Rule 32 of the Federal Rules of Civil Procedure, and more specifically section (a)(2) thereof, to be relevant in this situation. Rule 32(a)(2) provides as follows:

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<sup>24</sup> Memorandum from Robert E. Martin, Sr., to Atomic Safety and Licensing Board and All Parties (Mar. 4, 2005), with attachments, ADAMS Accession No. ML050600059; [BREDL]'s Petition for Expedited Discretionary Review of No Significant Hazards Consideration Determination and Request for Immediate Order That Duke May Not Accept Plutonium MOX Fuel Shipment (Mar. 9, 2005).

<sup>25</sup> Tr. 4706-10, 5356-57.

<sup>26</sup> Tr. 4706-07.

<sup>27</sup> Tr. 4711; Duke Findings at 9.

<sup>28</sup> Letter from Diane Curran to Licensing Board (Feb. 3, 2005).

<sup>29</sup> See, e.g., *Consolidated Edison Co. of New York* (Indian Point, Unit 2), LBP-83-29, 17 NRC 1117, 1118-20 (1983) (finding Federal Rule of Civil Procedure 32(a)(2) did not apply because the deponent was not an "officer").

The deposition of a party or of anyone who at the time of taking the deposition was an officer, director, or managing agent, or a person designated under Rule 30(b)(6) or 31(a) to testify on behalf of a public or private corporation, partnership or association or governmental agency which is a party may be used by an adverse party for any purpose.

Under this rule a trial court may not exclude a deposition merely because the party is available to testify in person. *Community Counseling Service, Inc. v. Reilly*, 317 F.2d 239, 243 (4th Cir. 1963). “It has been consistently held that the Rule permits a party to introduce, as part of his substantive proof, the deposition of his adversary, and it is quite immaterial that the adversary is available to testify at the trial or has testified there.” Charles Alan Wright et al., *Federal Practice & Procedure* § 2145, at 171 (1994 & Supp. 2003).

The determination of who is a “managing agent” of a corporate party whose discovery deposition may be used by an adversary is made on a case-by-case, pragmatic basis, with courts considering the corporate employee’s rank or title and supervisory powers; the extent of the corporate employee’s power to exercise judgment and discretion in dealing with corporate matters; the nature and extent of the employee’s functions, responsibilities, and duties respecting the matters involved in the litigation; whether the person could be relied upon to give testimony, at management’s direction, in response to the demand of a party engaged in litigation with the corporation; whether the employee’s interests are identified with those of corporate management; and whether there is any person in higher authority who could possess the information sought. 23 Am. Jur. 2d *Depositions & Discovery* § 180 (1983 & Supp. 2000).

Mr. Williams is the Technical Specialist at Catawba Nuclear Station who oversees the Armed Response Program and is responsible for formulating the defensive strategy, placement of defensive positions and delay barriers, target set development, and ensuring that the regulatory requirements are met. Statement of Qualifications for Howard B. Williams, Exh. SEC-4. Additionally, Mr. Williams plans and executes all tabletop drills, coordination with local and state law enforcement agencies, and force-on-force exercises to meet the Design Basis Threat. *Id.*

The Board concludes that Mr. Williams is a “managing agent” for the purpose of giving testimony regarding security matters at Catawba. The extensive nature of Mr. Williams’ supervisory powers, the extent of his power to exercise judgment and discretion in carrying out his duties, and the nature and extent of his functions, responsibilities, and duties in security-related matters at Catawba is clearly demonstrated in the record. Furthermore, Mr. Williams appears to possess an identity of interests with Duke and was responsive to directions by Duke to give testimony at this proceeding. Although Mr. Byers, as the Security Manager, is technically a person of higher authority who may possess information sought



by BREDL, during the hearing Mr. Byers occasionally deferred to Mr. Williams in answering questions, demonstrating that Mr. Williams is an appropriate source for much of the information relevant in this proceeding. Therefore, Mr. Williams' deposition may be used by BREDL as substantive evidence, and we accordingly admit into the evidentiary record as Exhibit SEC-SAF-27 those portions of the deposition specified by BREDL, namely, pages 32-34, 38-40, 53-55, 66-68, and 83-114.

### **B. Red Team Report**

Also during the January hearing,<sup>30</sup> after submitting, as Exhibit SEC-17, portions of a DOE-originated document called the "Proliferation Vulnerability Red Team Report" and designated as Official-Use-Only (OUO), BREDL offered to attempt to locate a more complete unrestricted-use copy of the document. A complete OUO version of the document was admitted into evidence at the hearing, at the instance of the NRC Staff, as Exhibit SEC-OUO-2. After the hearing, BREDL counsel submitted an unrestricted-use copy of the report, requesting that it be substituted for the Staff's OUO version. The NRC Staff has no objection to BREDL substituting the more complete unrestricted version for BREDL's partial unrestricted version of the report previously admitted as Exhibit SEC-17, but objects to its admission in place of Exhibit SEC-OUO-2. We find reasonable both the Staff's argument in support of maintaining its own version in the record as Exhibit SEC-OUO-2, and BREDL's request to have the more complete unrestricted version admitted into the record. The unrestricted version now offered by BREDL will therefore be substituted for Exhibit SEC-17 in the official evidentiary record, and SEC-OUO-2 will remain in the record.

### **C. Motion To Reopen**

BREDL requests in its February 7 Motion that we reopen the evidentiary record in this proceeding to permit the consideration of a January 18, 2005, speech by former Secretary of Energy Spencer A. Abraham. Specifically cited is a statement by Secretary Abraham that he had "directed the [National Nuclear Security Administration (NNSA)] and [Office of Security and Safety Performance Assurance (SSA)] to jointly review the options available to the Department to achieve the implementation of an elite force at DOE facilities possessing Category I or II quantities of Special Nuclear Material."<sup>31</sup> BREDL urges that Secretary Abraham's statement contradicts the NRC Staff's testimony during the January

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<sup>30</sup> Tr. 5035-36.

<sup>31</sup> BREDL Motion, Attachment 2 at 7.

11-14 hearing that the MOX LTAs now at issue would be classified by DOE as Category II SSNM and therefore should be treated under a lower standard of protection than that for more concentrated forms of SSNM. Noting that the Staff's testimony is cited by Duke in its Proposed Findings, BREDL suggests that Secretary Abraham's statement indicates that protection for MOX LTAs should not be differentiated from that provided for DOE Category I SSNM, and supports the testimony of its own expert, Dr. Edwin Lyman, disputing the Staff's testimony that the MOX LTAs should be classified as equivalent to DOE Category II material.<sup>32</sup>

As the parties have pointed out, under 10 C.F.R. § 2.734,<sup>33</sup> reopening the record is required only when new evidence is shown to be (1) timely, (2) safety or environmentally significant, and, when it is filed after a decision has been issued, (3) sufficiently material to change the result initially reached. Filing prior to issuance of a decision should also, of course, demonstrate significant materiality

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<sup>32</sup> BREDL Motion at 2-3.

<sup>33</sup> The citation to 10 C.F.R. § 2.734 is to the former section number that was in effect prior to a significant revision to the agency's 10 C.F.R. Part 2 rules of practice and procedure, which became effective February 13, 2004. Under part of this revision, the provisions of section 2.734 were moved to a new section, § 2.326, with minor wording changes. *See* 69 Fed. Reg. 2182, 2220-22 (Jan. 14, 2004). Because this proceeding commenced prior to the effective date of the revision, the former Part 2 rules still apply here, and we therefore refer herein to the former 10 C.F.R. § 2.734, which provides as follows:

(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.

(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.

(c) A motion predicated in whole or in part on the allegations of a confidential informant must identify to the presiding officer the source of the allegations and must request the issuance of an appropriate protective order.

(d) A motion to reopen which relates to a contention not previously in controversy among the parties must also satisfy the requirements for nontimely contentions in § 2.714(a)(1)(i) through (v).

of the new evidence, or, as the Commission has stated, present “material, probative evidence which either could not have been discovered before or could have been discovered but is so grave that, in the judgment of the presiding officer, it must be considered anyway.”<sup>34</sup> In addition, although the standard for reopening is a stringent one, where, as BREDL has noted, evidence could be considered without undue burden on the parties, it has been held by a previous licensing board that the board could consider material and relevant evidence, on its own motion, in part in order to fulfill its “important responsibility . . . to preserve a record suitable for review.”<sup>35</sup>

BREDL argues that its motion meets the three basic section 2.734 criteria for reopening the record, that it is supported by a competent affidavit and factual basis, and that considering it would not create any undue burden for the parties.<sup>36</sup> Secretary Abraham’s speech raises two “significant” and “grave” safety and security issues, BREDL contends, that are relevant in this proceeding — in the asserted indication that DOE will henceforth not distinguish between Category I and II SSNM “for purposes of setting a standard for the quality of the armed response that is provided for its protection,”<sup>37</sup> as well as the asserted indication “that DOE is significantly upgrading its requirements for armed responders at both Category I and Category II facilities.”<sup>38</sup> Because Secretary Abraham’s speech assertedly contradicts the Staff and Duke’s reliance on DOE’s classification that would treat the MOX LTAs as being in a category warranting lower security protection than Category I material, BREDL maintains it could have a “material bearing on the outcome of this proceeding.”<sup>39</sup> Moreover, BREDL argues, as required by 10 C.F.R. § 2.734(b), the motion is supported by a competent affidavit, that of Dr. Lyman, which addresses relevant issues and identifies specific portions of the speech that should be considered.<sup>40</sup>

BREDL insists the motion is timely, because it has been submitted in time for us to consider it in making our decision, and because the speech was not made until after the conclusion of the hearing.<sup>41</sup> BREDL also provides a copy of a May 2004 speech made by Secretary Abraham in which he also discussed his “‘vision’ for widespread use within DOC [*sic*] of an elite protective force sometime in the

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<sup>34</sup> 51 Fed. Reg. 19,535, 19,538 (May 30, 1986).

<sup>35</sup> *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), LBP-78-2, 7 NRC 83, 85 (1978); *see* BREDL Motion at 8.

<sup>36</sup> BREDL Motion at 4, 8.

<sup>37</sup> *Id.* at 5.

<sup>38</sup> *Id.*

<sup>39</sup> *Id.* at 7-8.

<sup>40</sup> *Id.* at 8-9.

<sup>41</sup> *Id.* at 6.

future,” but suggests that the January 18 speech “appears to constitute his first public announcement that DOE has actually instituted a program.”<sup>42</sup>

Duke and the Staff oppose BREDL’s motion.<sup>43</sup> Duke argues that BREDL’s motion is neither timely, nor raises a significant safety issue, nor shows that it would lead to a materially different result in this proceeding, and to consider the evidence “would impermissibly expand the scope of the proceeding to include generic [DOE] initiatives,” and could also cause delay in the issuance of this Decision.<sup>44</sup> In addition, Duke argues, “[w]hat BREDL actually seeks is an amendment of NRC security regulations,” an improper matter to consider in this proceeding, or alternatively, “an improper request for reconsideration of the Commission’s holding in CLI-04-29 that ‘there is no rational reason for Catawba to have a significantly different level of security than is already existing at the reactor site.’”<sup>45</sup> In addition, Duke has submitted the affidavit of its expert, Steven Nesbit, in opposition to that of Dr. Lyman should we consider it. Mr. Nesbit states in his affidavit that Secretary Abraham’s speech does not imply that the security forces for Category I and II facilities would be the same, does not define an “elite force,” is not “reliable evidence of any protection strategies used by DOE at its Category I or Category II facilities,” does not provide any detail on the scope or schedule of any implementation of any DOE changes, and does not bear on DOE categorization of SSNM.<sup>46</sup>

The Staff argues that BREDL’s motion “fails to meet any of the requirements of 10 C.F.R. § 2.734,” specifically, that it is not timely, does not address a significant safety issue, and presents irrelevant evidence that would not materially affect the result in this proceeding.<sup>47</sup> The Staff states that “the DOE initiative is not applicable to NRC facilities and therefore does not address any issue pertinent to this proceeding’s license amendment and exemptions granted under NRC regulations.”<sup>48</sup> In the supporting affidavit of Sherri Cross and Albert G. Garrett, the argument is made that “the speeches only indicate a proposed upgrade to the current DOE forces,” none of the improvements of which have been implemented and which “otherwise are not relevant to the instant proceeding.”<sup>49</sup> The Staff distinguishes the testimony it offered at the hearing as being relevant

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<sup>42</sup> *Id.* at 4 & Attachment 3.

<sup>43</sup> *See* Duke Response; Staff Response.

<sup>44</sup> Duke Response at 1-2.

<sup>45</sup> *Id.* at 2.

<sup>46</sup> *Id.*, Attached Affidavit of Steven P. Nesbit Regarding [BREDL Motion], at 2-3.

<sup>47</sup> Staff Response at 4-8.

<sup>48</sup> *Id.* at 6.

<sup>49</sup> *Id.*

only “with regard to DOE MC&A<sup>50</sup> requirements to determine attractiveness,” whereas Secretary Abraham’s speech contained no references to the MC&A requirements; “therefore, nothing in his speech has any impact on the Staff’s attractiveness determination”; and the “elite protective force” discussed in it “has no bearing on Duke’s request for exemptions from NRC regulations or to the[] admitted contention.”<sup>51</sup> Finally, the Staff asserts, “if, when, and how the initiative [discussed by Secretary Abraham] comes to fruition remains to be seen,” and thus constitutes only evidence which is not in final form and is thus “not a particularly useful item on which to rely.”<sup>52</sup>

Duke and the Staff support their challenge to the timeliness of BREDL’s motion by pointing out that the information BREDL puts forth was previously available in Secretary Abraham’s May 2004 speech, in which he discussed, in the Staff’s words, “plans to create a protective force with an ‘elite mission focus.’”<sup>53</sup> The Staff points out that the information in question “had been widely available through a variety of internet sources since May of 2004.”<sup>54</sup>

The Staff and Duke’s arguments regarding timeliness appear at first blush to have some merit; information on the possibility of establishing the elite force that might be responsible for protection of Category I and II SSNM was available in May 2004. However, the words used by Secretary Abraham in May 2004 included such language as “[i]t *may mean* awarding a common, complex-wide protective force contract for, at a minimum, those protective force elements that protect Category I and II SNM,” and “it *may mean* establishing a special, elite federal force for protection of Category I and II SNM”<sup>55</sup> — language that would tend to support *not* considering it under the Staff’s theory regarding lack of finality. The Secretary’s January 18, 2005, statement that he had “*directed* the NNSA and SSA to *jointly review the options* available to the Department to *achieve the implementation* of an elite force at DOE facilities possessing Category I or II quantities of Special Nuclear Material,” is, on the other hand, obviously

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<sup>50</sup> “MC&A” stands for “Manual for Control and Accountability of Nuclear Materials.” Tr. 4982; see Exh. SEC-22.

<sup>51</sup> Staff Response at 7.

<sup>52</sup> *Id.* at 8. The Staff also points out, in response to a BREDL suggestion that the primary responsibility of a Tactical Response Team (TRT) under relevant NRC security regulations is to “protect the MOX LTAs from theft,” that the regulations define a TRT as “the primary response force for each shift which can be identified by a distinct item of uniform, armed with specified weapons, and whose other duties permit immediate response.” Staff Response at 2. We address this issue generally in our discussion of Duke’s request for exemption from NRC regulations relating to the TRT, in section V.E, below.

<sup>53</sup> Staff Response at 4; see Duke Response at 8.

<sup>54</sup> Staff Response at 4.

<sup>55</sup> See BREDL Motion, Attachment 3 at 10 (emphasis added); see also Staff Response, Attachment B at 9.

significantly more definite and final than the May statements. And the January 18 statement obviously occurred after the January 11-14 hearing. In addition, although BREDL might well have filed its motion earlier than February 7 given Dr. Lyman's statement that he found the material in question on January 20, we do not find the 18 days that it took BREDL to file its motion to be delay that would warrant denying the motion.

With regard to the arguments of Duke and the Staff on the relevance of the information in question, we find these to be less persuasive than those on timeliness. First, we do not find that consideration of Secretary Abraham's statement would "impermissibly expand the scope of [this] proceeding to include generic [DOE] initiatives," or that it would entail any improper "amendment of NRC security regulations," or constitute "an improper request for reconsideration of the Commission's holding in CLI-04-29." The pertinent question with regard to relevance is simply whether the Secretary's statement is in some way relevant to any issues now before us in this part of this proceeding.

In this regard, we note that the Staff, and Duke through its reliance on the Staff testimony to such effect, *relied on* DOE's classification of SSNM material as Category I or Category II, not simply with regard to the relative attractiveness of the MOX LTAs considered in a vacuum, but also by necessary implication with respect to *what protective measures should, as a result of the level of attractiveness, be required* with regard to it, and whether and the extent to which the requested exemptions should be granted. The *only* relevance of the attractiveness issue itself in this proceeding is to these related issues of the protective measures that should be required of Duke, and the extent to which Duke's requests for exemption from various NRC Category I requirements, relating to security measures for protection of SSNM, should be granted.

We find the following testimony of the Staff to be enlightening on these issues:

(U)<sup>56</sup> A3a (SC)<sup>57</sup> Based upon my recent experience at a PU facility, I was assigned to assist with the evaluation of Duke's request for exemptions from certain 10 C.F.R. Part 73 and Part 11 requirements. My duties in connection with the review of the LAR have been focused on the categorization of the material *and evaluation of the physical protection afforded this material while at Catawba.*<sup>58</sup>

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<sup>56</sup>“(U)” means the paragraph indicated is unclassified and not SGI.

<sup>57</sup>The letters at the beginning of various paragraphs of Staff testimony indicate the initials of the particular Staff members whose testimony is provided.

<sup>58</sup>Tr. 4973 (emphasis added).

- (U) A23 (AG, SC, MB) . . . . The SSNM contained in the MOX LTAs is significantly different than the SSNM handled by the currently licensed Category I facilities. *Therefore, it need not be protected in the same manner. Consequently, Duke requested, and the Staff recommended approval of, exemptions from certain security requirements that would otherwise apply to Catawba while it possessed unirradiated MOX fuel.*
- (U) Q24 *How did you make the determination that the SSNM in the MOX LTAs was significantly different from the material handled by Category I fuel cycle facilities?*
- (U) A24 (AG, SC) There are no NRC regulations dealing specifically with MOX fuel assemblies. Therefore, *to assist in the evaluation of the Duke request, Staff referenced DOE policies relating to physical protection of similar material at DOE facilities, including DOE Manual 474.1-1B, ‘Manual for Control and Accountability of Nuclear Materials’* . . . .
- (U) Q25 Briefly describe the results of the Staff review of the DOE references.
- (U) A25 (AG, SC) The Staff review found that, under DOE requirements/guides, material of the composition and form is not a Category I quantity, due to its low attractiveness . . . . In DOE terms, the MOX fuel assemblies would be categorized as Category II, Attractiveness Level D special nuclear material (SNM). *As such, DOE would not require Category I physical protection for this material.* . . . .
- (U) Q26 Did the Staff consult any other DOE documents or sources?
- (U) A26 (AG, SC) Yes, to ensure that DOE practices had not changed recently, the Staff consulted with DOE MC&A representatives at the DOE Field Offices at the Savannah River Site . . . . The answers from both the DOE MC&A representatives confirmed the Staff’s evaluation. Both stated the MOX LTAs would be Category II, Attractiveness D SNM and would not be Category I.<sup>59</sup>

. . . .

WITNESS CROSS: . . . . And since the material that is going to be at Catawba, in the form of the four MOX LTAs is significantly different than the material at the category I facilities for which the regulations were really intended, I relied on some of my previous experience with the Department of Energy, whereas they look at the quantities of material, and the form that they are in, *and grade the protection strategy based on how close that material is to being in weapons form*, for this type of material. . . .<sup>60</sup>

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<sup>59</sup> Tr. 4982 (emphasis added).

<sup>60</sup> Tr. 5112 (emphasis added).

WITNESS CROSS: . . . . In looking at the strategy, they break the material into what they call attractiveness levels. And *based on the attractiveness level, the more attractive the material is, the more protection is required, because you assume that the adversary would go for the best target.*

*Because once he gets it there is [sic] less he has to do with the material in order to create a nuclear device. . . .*<sup>61</sup>

Given the clear, direct, and unmistakable connection between the Staff's use of the DOE classification manual and the Staff's evaluation of the level of protection needed for the SSNM in the MOX assemblies, it is similarly clear that, to the extent Secretary Abraham in his speech directed DOE staff to "review the options available to the Department *to achieve the implementation of an elite force at DOE facilities possessing Category I or II quantities of Special Nuclear Material,*" at least a question is raised regarding the extent to which DOE would henceforth have a *protection strategy* that would treat Category I and II quantities of SSNM the same or differently based on their relative attractiveness. Although not entirely free of ambiguity, the former Secretary's statement may be taken to indicate that the two categories of nuclear material might in the future be addressed the same or similarly with regard to the *level of protection* that would be required for them.

The relative attractiveness of the MOX LTAs has been a central argument of Duke and the Staff as to why the *level of protection* for them need not be as stringent as those for other NRC Category I SSNM, such as that found in fuel fabrication facilities. The Staff's testimony relying on the DOE categories went directly to this issue, and the information from the Abraham speech may therefore be viewed as raising questions about such reliance to support the "relative attractiveness" argument of Duke and the Staff. The evidence in question is therefore relevant in the extent to which it raises a question regarding, or impeaches, the Staff's testimony on the level of protection appropriate for the MOX LTAs based on its level of attractiveness according to the DOE categorization scheme.

With regard to the significance of the safety issue, it can hardly be argued that the strength of the attractiveness argument is not a significant issue in this proceeding, as it is the basis on which many of Duke's arguments rest, regarding the need for various security measures to protect the MOX LTAs. With respect to the significance of the new information, however, we find that the most it does is raise a question about the Staff's reliance on the DOE categories of attractiveness of various types and forms of SSNM. As demonstrated below, we did not in reaching our findings place much significance on the Staff's reliance on the DOE categories, and so the import of the information from Secretary Abraham's January 18 speech is also not of great significance to us in reaching our findings

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<sup>61</sup> Tr. 5113 (emphasis added).



herein. Thus, it might arguably be concluded that BREDL's motion does not raise a significant safety issue that would materially affect the outcome of this proceeding.

Although we might therefore deny the motion, we will refrain from doing so, because of the significance of the attractiveness issue as it has been argued by Duke and the Staff, and the relevance of the evidence in question to this issue; in the interest of fulfilling our duty to ensure that there is a complete record in this proceeding; and because at this point it would impose no burden at all on the parties, as they have all, either originally or at our direction,<sup>62</sup> already filed any and all evidence relevant to the subject matter of BREDL's motion.

We will thus grant the motion to the extent of allowing the attachments to the motion and responses to be added to the evidentiary record in the proceeding, to be accorded whatever weight is appropriate, both by us at this level of this proceeding, and in any appeal that may be taken from this Decision. Dr. Lyman's affidavit and attachments will be marked and admitted as Exhibit SEC-SAF-27; Mr. Nesbit's affidavit will be marked and admitted as Exhibit SEC-SAF-28; and the Staff's affidavit and attachments will be marked and admitted as Exhibit SEC-SAF-29.

In admitting these exhibits, we would, finally, note that, although we do not give any of the DOE-related "relative attractiveness/level of protection" evidence much weight in our determinations, this is not to suggest that we have not seriously and attentively considered the arguments and evidence of all parties with regard to this information. Nor do we mean to suggest that the subject matter of Secretary Abraham's speech, inasmuch as it speaks to the critical need to upgrade security measures for nuclear materials in the wake of 9/11, is not significant or important. The NRC has demonstrated awareness of the need to upgrade security requirements for the protection of nuclear material as a direct result of 9/11. And our ruling herein, to the extent it does not explicitly so state, implicitly rests on the critical need to protect the material in the MOX LTAs at issue herein from any possibility of terrorists gaining access to it. It bears emphasizing that this issue is, as it very obviously should be, of vital importance to us in reaching our Decision.

We turn now, more directly, to the facts and law on which our Decision is based.

#### **IV. GOVERNING LEGAL STANDARDS**

The legal standards that are applicable in this proceeding are found in various NRC regulations. First, under 10 C.F.R. § 50.90, whenever a holder of a license

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<sup>62</sup> See Order (Regarding BREDL Motion To Re-open Record) (Feb. 9, 2005) (unpublished).

wishes to amend the license, including technical specifications in the license, an application for amendment must be filed, fully describing the changes desired. Under section 50.92(a), determinations on whether to grant an applied-for license amendment are to be guided by the considerations that govern the issuance of initial licenses or construction permits to the extent applicable and appropriate. Both the common standards for licenses and construction permits in section 50.40(a), and those specifically for issuance of operating licenses in section 50.57(a)(3), provide that there must be “reasonable assurance” that the activities at issue will not endanger the health and safety of the public.

In addition, a licensee who possesses or uses formula quantities of SSNM<sup>63</sup> is required not only to demonstrate “reasonable assurance” of safety, but also, under 10 C.F.R. § 73.20(a), to have a physical protection system with an objective of providing “*high assurance* that activities involving special nuclear material are not inimical to the common defense and security, and do not constitute an unreasonable risk to the public health and safety.” The plutonium contained in the MOX fuel assemblies that are the subject of Duke’s LAR will, during the limited time after delivery and prior to irradiation in the core of the reactor, be “weapons-usable” material<sup>64</sup> and constitute SSNM in a “formula” quantity that triggers application of section 73.20 as well as various other “Category I” security requirements relating to a facility’s physical protection system, over and above those normally required for a reactor.<sup>65</sup>

Duke agrees that Catawba would “technically be subject to Category I security requirements” while MOX fuel is there prior to its irradiation in the core,<sup>66</sup> but argues that because Catawba is not a Category I facility in the normal sense<sup>67</sup> not all of the heightened requirements relating to Category I facilities should apply to Catawba during the time at issue in this proceeding, and it should therefore be exempted from several such requirements. The provisions from which Duke seeks exemption include those found in 10 C.F.R. §§ 11.11(b) (regarding clearances required for workers), 73.46(d)(9) (regarding access and search issues), 73.46(c)(1) (regarding physical barriers), and 73.46(h)(3) and (b)(3)-(12) (regarding a tactical response team and related requirements).<sup>68</sup> Sections 11.9 and 73.5 provide, respectively, that exemptions from the requirements of 10 C.F.R. Part 11 may be granted if they are authorized by law and will not constitute an undue risk to the common defense and security, and that exemptions from the requirements of Part

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<sup>63</sup> See *supra* note 1.

<sup>64</sup> Tr. 3874; i.e., plutonium that is not self-protecting in accordance with 10 C.F.R. § 73.6(b) and is thus not exempt from section 73.20.

<sup>65</sup> Tr. 3873-74.

<sup>66</sup> Tr. 3874.

<sup>67</sup> See *infra* note 104 and accompanying text.

<sup>68</sup> We quote the relevant regulatory provisions in notes to our discussion of each in section V, below.

73 may be granted if they are authorized by law, will not endanger life or property or the common defense and security, and are otherwise in the public interest.

Finally, the physical protection system for possession of SSNM must also, under section 73.20(a), be “designed to protect against the design basis threats [DBTs] of theft or diversion of [SSNM] and radiological sabotage as stated in § 73.1(a).” Although Duke does not seek exemption from these design basis threats, they are relevant, both to demonstrate the threat against which the measures at issue are intended to protect, and because the parties differ on the meaning of certain of the language used in their definition (an issue we address in section VI, below). Section 73.1 defines the DBTs as follows:

(1) *Radiological sabotage.* (i) A determined violent external assault, attack by stealth, or deceptive actions, of several persons with the following attributes, assistance and equipment:

(A) Well-trained (including military training and skills) and dedicated individuals,

(B) inside assistance which may include a knowledgeable individual who attempts to participate in a passive role (e.g., provide information), an active role (e.g., facilitate entrance and exit, disable alarms and communications, participate in violent attack), or both,

(C) suitable weapons, up to and including hand-held automatic weapons, equipped with silencers and having effective long-range accuracy,

(D) hand-carried equipment, including incapacitating agents and explosives for use as tools of entry or for otherwise destroying reactor, facility, transporter, or container integrity or features of the safeguards system, and

(E) a four-wheel drive land vehicle used for transporting personnel and their hand-carried equipment to the proximity of vital areas, and

(ii) An internal threat of an insider, including an employee (in any position), and  
(iii) A four-wheel drive land vehicle bomb.

(2) *Theft or diversion of formula quantities of strategic special nuclear material.* (i) A determined, violent, external assault, attack by stealth, or deceptive actions by a small group with the following attributes, assistance, and equipment:

(A) Well-trained (including military training and skills) and dedicated individuals;

(B) Inside assistance that may include a knowledgeable individual who attempts to participate in a passive role (e.g., provide information), an active role (e.g., facilitate entrance and exit, disable alarms and communications, participate in violent attack), or both;

(C) Suitable weapons, up to and including hand-held automatic weapons, equipped with silencers and having effective long-range accuracy;

(D) Hand-carried equipment, including incapacitating agents and explosives for use as tools of entry or for otherwise destroying reactor, facility, transporter, or container integrity or features of the safe-guards [*sic*] system;

(E) Land vehicles used for transporting personnel and their hand-carried equipment; and

- (F) the ability to operate as two or more teams.
- (ii) An individual, including an employee (in any position), and
- (iii) A conspiracy between individuals in any position who may have:
  - (A) Access to and detailed knowledge of nuclear power plants or the facilities referred to in § 73.20(a), or
  - (B) items that could facilitate theft of special nuclear material (e.g., small tools, substitute material, false documents, etc.), or both.

The Commission has augmented the preceding requirements in various orders issued to NRC licensees, including an April 29, 2005, order applicable to Catawba.<sup>69</sup>

## V. FINDINGS OF FACT

### A. General Information Relating to Matters at Issue

The matters at issue herein concern the physical protection system that Duke plans to have in place to protect the MOX fuel assemblies against the DBT for theft during the period from DOE's delivery of them to the plant until the loading of them into the core of one of Catawba's two reactors for irradiation. As indicated above, we have before us Duke's requests for exemption from several of the heightened security requirements for the physical protection system during this period of time, specifically those relating to worker clearances, access and search issues, physical barriers, and a tactical response team. As the parties have presented their evidence and arguments largely in formats that cut across the specific exemptions and apply more broadly, we begin by noting some of these more general security-related facts, which form a backdrop to our discussion below of the specific exemption requests at issue.

#### 1. Security Measures at Catawba

The Catawba plant is located in a rural area approximately 6 miles north of Rock Hill, South Carolina, adjacent to Lake Wylie. The plant has a 2500-foot

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<sup>69</sup> See Tr. 3877. A quorum of the Licensing Board originally found a "need to know" on the part of BREDL counsel and expert to this order. Memorandum and Order (Ruling on BREDL Motion for Need To Know Determination and Extension of Deadline for Filing Security-Related Contentions) (Jan. 29, 2004) (SGI); Memorandum (Providing Notice of Granting BREDL Motion for Need To Know Determination and Extension of Deadline for Filing Security-Related Contentions) (Jan. 29, 2004). The Commission reversed the Board in CLI-04-6, 59 NRC 62 (2004), stating among other things that the "current proceeding has nothing to do with the NRC's post-September 11 general security orders." 59 NRC at 72.



by access portals equipped with locking and alarm devices.<sup>75</sup> x x x x x x x x x x x  
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x x.<sup>77</sup> All who enter through  
the VAP or PAP are searched using specialized search equipment.<sup>78</sup> In addition,  
a 1.5-mile-long ditch vehicle barrier system (VBS) protects x x x x x x x x x x x  
x x x x x x x x x x.<sup>79</sup>

The security force for Catawba has four teams that work 12-hour duty shifts:  
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All armed responders are trained and authorized x x x x x x x x x x x x x x x x  
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<sup>75</sup> *Id.*  
<sup>76</sup> Tr. 3887-88.  
<sup>77</sup> Tr. 3876.  
<sup>78</sup> *Id.*  
<sup>79</sup> *Id.*  
<sup>80</sup> Tr. 4039-41.  
<sup>81</sup> Tr. 3918.  
<sup>82</sup> Tr. 3878, 4040-42.  
<sup>83</sup> Tr. 5234-35.















while in the plant through Duke's search and access requirements. We then turn to the exemption requests having to do with physical barrier requirements. We conclude the findings of fact with our consideration of the exemption requests that received perhaps the greatest amount of attention in the hearing — those relating to the tactical response team requirements, including provisions on what exercises are necessary to assure adequate preparedness to protect against the DBTs for radiological sabotage and theft.

## **B. Duke Request for Exemption from Clearance Requirements**

Duke has requested an exemption from the 10 C.F.R. § 11.11(b)<sup>118</sup> requirement that no individual be permitted to work at specified jobs without an NRC-R or NRC-U special nuclear material access authorization,<sup>119</sup> relying on its existing programs to justify the requested exemption.<sup>120</sup>

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<sup>118</sup> 10 C.F.R. § 11.11 provides in relevant part:

(a) Each licensee who uses, processes, stores, transports, or delivers to a carrier for transport, formula quantities of special nuclear material . . . subject to the physical protection requirements of . . . § 73.46 . . . shall identify at its facility or plant . . . , describe, and . . . provide to the Commission . . . by amendment to its security plan:

(1) All jobs in which an individual could steal or divert special nuclear material, or commit sabotage which would endanger the public by exposure to radiation, by working alone or in cooperation with an individual who does not possess an NRC - U special nuclear material access authorization, or by directing or coercing any individual to assist in the theft, diversion, or sabotage. Such jobs include but are not limited to:

- (i) All positions in the licensee's security force,
- (ii) Management positions with the authority to:
  - (A) Direct the actions of members of the security force or alter security procedures, or
  - (B) Direct routine movements of special nuclear material, or
  - (C) Direct the routine status of vital equipment.
- (iii) All jobs which require unescorted access within onsite alarm stations.
- (iv) All jobs which require unescorted access to special nuclear material or within vital areas.

(2) All jobs which require unescorted access within protected areas and which do not fall within the criterion of paragraph (a)(1) of this section.

(b) After 365 days following Commission approval of the amended security plan submitted in accordance with paragraph (a) of this section, no individual may be permitted to work at any job determined by the Commission to fall within the criterion of paragraph (a)(1) of this section without an NRC-U special nuclear material access authorization, and no individual may be permitted unescorted access to any protected area at any site subject to this Part without either an NRC-U or NRC-R special nuclear material access authorization. . . .

Exceptions are provided in the rule for individuals in various circumstances who have submitted applications for the relevant clearances.

<sup>119</sup> See Exh. SEC-SAF-1, Attachment 7 at 5-7.

<sup>120</sup> Tr. 3963, 4409-10.

### ***1. Facts Asserted To Support Exemption***

Duke points out in support of its exemption request regarding clearances that many of the individuals with access to the fuel building, x, are required to obtain DOE-L clearances prior to the delivery of the MOX fuel.<sup>121</sup> The DOE-L clearance is about the equivalent of an NRC-R clearance.<sup>122</sup> Therefore, many of the Duke employees involved with MOX activities will have successfully satisfied a government clearance similar to the required NRC clearances set forth in 10 C.F.R. § 11.11(b).

In addition, under Duke’s existing access authorization program all individuals permitted unescorted access must undergo a background investigation similar in scope to the background investigation for NRC-U access authorization.<sup>123</sup> This covers all personnel who have unescorted access, including both contractors and Duke employees,<sup>124</sup> and includes background and criminal history checks, in accordance with the requirements in 10 C.F.R. §§ 73.56, 73.57, and portions of 10 C.F.R. Part 26.<sup>125</sup> Part of this process requires that Duke obtain fingerprints from each individual seeking clearance for comparison with certain FBI databases, and that checks also be made with regard to applicants’ military history, employment history, education, credit history, character, reputation, emotional stability, trustworthiness, and reliability.<sup>126</sup> Applicants are also subjected to an initial drug and alcohol screening, followed up by random drug and alcohol testing.<sup>127</sup>

Duke has also implemented a “Continuous Behavioral Observation Program” and an “Insider Mitigation Program.” The former is designed to ensure that personnel continue to meet the initial standards for trustworthiness and reliability.<sup>128</sup> It consists of ongoing supervisory behavior observations with an objective of detecting illegal drug use, drug and alcohol abuse, and other behaviors that may indicate an unreasonable risk to the health and safety of the public.<sup>129</sup>

The Insider Mitigation Program is modeled after NEI-03-01, Revision 1, Nuclear Power Plant Access Authorization Program.<sup>130</sup> This program supplements the access authorization requirements and mandates that critical group personnel complete an initial and periodic psychological evaluation, which includes a clinical interview. Critical group personnel are also required to be

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<sup>121</sup> Tr. 4563, 4570.

<sup>122</sup> See 10 C.F.R. § 11.15(c)(3).

<sup>123</sup> Tr. 4410.

<sup>124</sup> Tr. 4569.

<sup>125</sup> Exh. SEC-SAF-1, Attachment 7 at 7.

<sup>126</sup> Tr. 3890, 3965.

<sup>127</sup> Tr. 3891.

<sup>128</sup> *Id.*

<sup>129</sup> *Id.*; Tr. 4411-13, 4613-14.

<sup>130</sup> Tr. 3891. NEI-03-01, Revision 1 has been admitted in evidence as Exh. SEC-SAF-26.



Program. Indeed, Duke requires more frequent periodic updates and more continuous oversight than the NRC-U or NRC-R clearance requirements.<sup>138</sup>

### C. Duke Request for Exemption from Access and Search Requirements

Duke requests exemption from two of the requirements of 10 C.F.R. § 73.46(d)(9)<sup>139</sup> — that armed guards must be posted at material access area (MAA) control points, and that all persons and materials entering MAA's must be searched.<sup>140</sup> Duke bases its request on its belief that, because the MOX assemblies are relatively unattractive targets, the additional measures taken to protect against theft and diversion make strict adherence to the requirements in 10 C.F.R. § 73.46(d)(9) unnecessary.<sup>141</sup>

#### 1. Facts Asserted To Support Exemption

We note preliminarily that Duke fulfills some of the requirements of 10 C.F.R. § 73.46(d)(9) as part of its compliance with 10 C.F.R. § 73.55(d), which provides that prior to entry into a PA there must be searches using various methods, for firearms, explosives, and incendiary devices, which is done at Catawba.<sup>142</sup> Duke also points out that individuals entering the Catawba PA are searched and positively identified by hand geometry biometric devices.<sup>143</sup> Vehicles entering the PA are also searched.<sup>144</sup>

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<sup>138</sup> Tr. 5012, 5194.

<sup>139</sup> Section 73.46(d)(9) provides:

The licensee shall control all points of personnel and vehicle access to material access areas, vital areas, and controlled access areas. At least two armed guards trained in accordance with the provisions contained in paragraph (b)(7) of this section and appendix B of this part shall be posted at each material access area control point whenever in use. Identification and authorization of personnel and vehicles must be verified at the material access area control point. Prior to entry into a material access area, packages must be searched for firearms, explosives, and incendiary devices. All vehicles, materials and packages, including trash, wastes, tools, and equipment exiting from a material access area must be searched for concealed strategic special nuclear material by a team of at least two individuals who are not authorized access to that material access area. Each individual exiting a material access area shall undergo at least two separate searches for concealed strategic special nuclear material. For individuals exiting an area that contains only alloyed or encapsulated strategic special nuclear material, the second search may be conducted in a random manner.

<sup>140</sup> Tr. 3950, 4367-68. *See also* Exh. SEC-SAF-1, Attachment 6 at 2 n.7.

<sup>141</sup> Tr. 3950.

<sup>142</sup> Tr. 3951.

<sup>143</sup> *Id.*

<sup>144</sup> *Id.*

























a force of guards or armed response personnel also must be available to provide assistance as necessary. The size and availability of the additional force must be determined on the basis of site-specific considerations that could affect the ability of the total onsite response force to engage and impede the adversary force until offsite assistance arrives. The rationale for the total number and availability of onsite armed response personnel must be included in the physical protection plans submitted to the Commission for approval.

In addition, section 73.2 states that “[t]actical [r]esponse [t]eam means the primary response force for each shift which can be identified by a distinctive item of uniform, armed with specified weapons, and whose other duties permit immediate response.”

*a. Facts Asserted To Support Exemption*

Duke’s primary argument with regard to the requirement for a tactical response team is to the effect that its minimum staffing will provide protection at least equivalent to that which would be provided with a TRT, and thus exemption from many of the subsections of section 73.46 would be “merely administrative, required only because Catawba will not use an armed response team labeled as a ‘TRT.’”<sup>194</sup> Although Duke agrees that some of its requests involve more substantive issues, it insists that, “[f]rom an overall performance perspective” its minimum staffing, as it has committed, will “provide protection at Catawba at least equivalent to that which would be provided at a Category I location with a TRT.”<sup>195</sup> Duke notes that neither the weaponry of its responders nor the distinctive dress of the responders, which sets them apart from other plant workers, is challenged. Also in this regard, Duke asserts that its management system and security procedures are equivalent to those required under 10 C.F.R. § 73.46(b)(3), (b)(4), and Appendix B to Part 73, and that, in any event, BREDL’s “scenarios” for theft attacks on Catawba have not in Duke’s estimation been shown to be able to defeat Duke’s security force.<sup>196</sup>

The Staff essentially agrees with Duke that a formally named “TRT” is not necessary, and that, with the additional measures Duke has already undertaken, a TRT as defined in the regulation is not required to protect the MOX LTAs.<sup>197</sup> The numbers of responders that Duke has are in the Staff’s view sufficient, in that they exceed the five-member requirement of subsection (h)(3), and are experienced

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<sup>194</sup> Duke Proposed Findings at 48.

<sup>195</sup> *Id.*

<sup>196</sup> Tr. 3953-56.

<sup>197</sup> Staff Findings at 39-40.





The Staff agrees that the training of the Catawba security force is adequate.<sup>212</sup>

*b. Facts Asserted in Opposition to Exemption*

BREDL expert Lyman testified that the Catawba responders should have enhanced training commensurate with that for the heightened threat against which a TRT is intended to protect, but offered little if any specific evidence to establish that the training offered was inadequate to meet the standards for a TRT.<sup>213</sup>

**3. TRT Physical Fitness Requirements**

*a. Facts Asserted To Support Exemption*

Although Duke does not test its responders' physical fitness every 3 months as required under 10 C.F.R. § 73.46(b)(12),<sup>214</sup> it contends that its annual fitness qualification procedures are equivalent to the requirements of subsection (b)(12). Duke commissioned the company, Human Performance Systems, Inc. (HPS), to analyze the job tasks performed by the armed officers and develop a battery of tests to determine whether officers are capable of meeting the specific physical demands of the job. The test includes completing twenty situps within 60

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<sup>212</sup> Staff Findings at 40.

<sup>213</sup> See, e.g., Tr. 4776.

<sup>214</sup> Section 73.46(b)(12) provides:

The licensee may elect to comply with the requirements of this paragraph instead of the requirements of paragraphs (b)(10) and (b)(11) of this section. In addition to the physical fitness qualifications of paragraph I.C of Appendix B of this part, each licensee subject to the requirements of this section shall develop and submit to the NRC for approval site specific, content-based, physical fitness performance tests which will — when administered to each Tactical Response Team member, armed response person, or guard — duplicate the response duties these individuals may need to perform during a strenuous tactical engagement.

(i) The test must be administered to each Tactical Response Team member, armed response person, and guard once every 3 months. The test must specifically address the physical capabilities needed by armed response personnel during a strenuous tactical engagement at the licensed facility. Individuals who exceed 3 months without having been administered the test due to excused time off from work must be tested within 15 calendar days of returning to duty as a Tactical Response Team member, armed response person, or guard.

(ii) Within 30 days before the first administration of the physical fitness performance test, and on an annual basis thereafter, Tactical Response Team members, armed response personnel, and guards shall be given a medical examination including a determination and written certification by a licensed physician that there are no medical contraindications, as disclosed by the medical examination, to participation in the physical fitness performance test.

(iii) Guards whose duties are to staff the central or secondary alarm station and those who control exit or entry portals are exempt from the performance test specified in paragraph (b)(12) of this section, provided that they are not assigned temporary response guard duties.

seconds, three arm lifts with an average of fifty as indicated by the “Jackson Evaluation System,” and eighty-eight revolutions on a stationary bicycle within 60 seconds.<sup>215</sup> In addition, officers are required to undergo a comprehensive physical examination prior to undergoing the test, and physical condition is monitored, for example, during stress firing.<sup>216</sup> Finally, Duke insists, security force supervisors monitor officers on the job, where they have demonstrated their ability to perform the physical tasks necessary to implement Duke’s protective strategy.<sup>217</sup>

The Staff agrees that Duke’s physical fitness program is adequate to ensure that its officers can protect the MOX fuel.<sup>218</sup>

*b. Facts Asserted in Opposition to Exemption*

As with the training requirement, BREDL has offered little specific argument or evidence on this issue, other than to refer to the general need for more physically fit responders, in accordance with the intent of the rule to establish a more “professional and effective organization.”<sup>219</sup>

**4. TRT Exercise Requirements**

Section 73.46(b)(9)<sup>220</sup> requires the conducting of exercises to demonstrate overall security system effectiveness, as well as ability to perform response and

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<sup>215</sup> Tr. 3961.

<sup>216</sup> *Id.*

<sup>217</sup> Tr. 3962.

<sup>218</sup> Staff Findings at 40.

<sup>219</sup> *See, e.g.*, Tr. 4775-77, 4779.

<sup>220</sup> Section 73.46(b)(9) requires the following with regard to TRT exercises:

(9) The licensee shall conduct Tactical Response Team and guard exercises to demonstrate the overall security system effectiveness and the ability of the security force to perform response and contingency plan responsibilities and to demonstrate individual skills in assigned team duties. During the first 12-month period following the date specified in paragraph (i)(2)(ii) of this section, an exercise must be carried out at least every three months for each shift, half of which are to be force-on-force. Subsequently, during each 12-month period commencing on the anniversary of the date specified in paragraph (i)(2)(ii) of this section, an exercise must be carried out at least every four months for each shift, one third of which are to be force-on-force. The licensee shall use these exercises to demonstrate its capability to respond to attempts to steal strategic special nuclear material. During each of the 12-month periods, the NRC shall observe one of the force-on-force exercises which demonstrates overall security system performance. The licensee shall notify the NRC of the scheduled exercise 60 days prior to that exercise. The licensee shall document the results of all exercises. The licensee shall retain the documentation of each exercise as a record for three years after each exercise is completed.



















the specific context in which that language is used, and the broader context of the statute [or regulation] as a whole.’’<sup>260</sup>

We will thus read the language at issue in context, both the specific context of the phrase, “small group with . . . the ability to operate as two or more teams,” and the broader context of the regulation as a whole, defining the design basis threat against which a licensee must be able to defend itself. In doing this, we see that, despite a certain facial appeal of the interpretation argued by the Staff and Duke, contrary to their focus on separate small *parts* of the regulation in question the proper focus under *Robinson* is on the *entire* phrase, *in context*. This leads us to consideration of what sort of group a licensee must be able to defend against as part of the DBT, in terms of *the group’s* attributes and abilities — including the group’s “*ability to operate*” as two or more teams. In this DBT context, the phrase, “small group with . . . the ability to operate as two or more teams,” might reasonably be read as requiring that a licensee must be able to defend against a group *that has the ability to operate alternatively as two or more teams*. The critical concept here is the ability *of the group* to divide into two or more teams, *not* the option of the licensee to choose the particular characteristics of the adversary group’s ability. It might, indeed, arguably be said that there is no ambiguity in the requirement that a licensee must be prepared to defend against a small group with the ability not only to divide into two teams but also, alternatively, to divide into more than two teams.

Assuming, however, there to be an ambiguity in the language in question, based on the Staff’s proposed alternative reading of it, as well as the use of the word, “or,” on which the Staff heavily relies, we look more closely at the proper interpretation of the word “or” in the phrase in question. We note, from *Sutherland* (probably the foremost treatise on statutory and regulatory construction), the importance of not reading the word “or” too strictly, “where to do so would render the language of the statute dubious.” We note also the Supreme Court’s observations on ambiguities associated with the word “or.”

First, Justice Harlan, writing for the Court in 1956, observed:

We start with the proposition that the word “or” is often used as a careless substitute for the word “and”; that is, it is often used in phrases where “and” would express the thought with greater clarity. That trouble with the word has been with us for a long time.<sup>261</sup>

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<sup>260</sup> *Id.* at 341.

<sup>261</sup> *De Sylva v. Ballentine*, 351 U.S. 570, 573 (1956).





effect allow a licensee to choose *either two or more* shipments when totaling the amount of material that may be shipped at the same time — i.e., a licensee could theoretically choose the “two-shipment” option in doing its required totaling, and ship multiple sets of *two* shipments, *each* set totaling less than a formula quantity, but all of which together would total an amount greater than a formula quantity. Such an interpretation would be contrary, of course, to the obvious intent and purpose of the rule, including the words “two or more” read in context, which is that *any* multiple number of shipments in transit at the same time — two, three, four, or more — must not, in total, consist of an amount “equal [to] or exceed[ing] the formula quantity.”<sup>264</sup>

Similarly, reading the rule whose interpretation is now before us to allow the Licensee to choose what the ability of the adversary group would be, in terms of how many teams the adversary would be able to divide into in making an attack, in the context of a rule that defines a DBT and refers to a “small group with . . . the ability to operate as two or more teams,” would counter the stated purpose of the rule. Specifically, section 73.1(a) begins as follows: “*Purpose.* This part prescribes requirements for the establishment and maintenance of a physical protection system . . .” The plain purpose of the rule is to *prescribe* those threats against which licensees are *required* to be prepared to defend themselves — *not* merely to list threats among which licensees may choose to defend themselves. A licensee must under the rule be prepared to defend against an adversary group that *has the ability to operate alternatively* in two *or more* groups.

Therefore, based both on well-established principles of statutory construction and on the purpose of the regulation at issue as determined by its context and language, we find that Duke, as a licensee covered by the rule, is required to be prepared to defend itself against an adversary group with the ability to operate in alternative configurations: in two teams or in more than two teams — which means, from Duke’s perspective, that it must be prepared to defend against an attack by two teams of adversaries, as well as against an attack by more than two teams of adversaries. In addition, we note that, although this is not necessary to our analysis, the DBT for theft of SSNM was obviously intended to be more challenging than that for radiological sabotage.

As to the number of adversaries in each team, the argument has centered on the word “squad.” We will not venture to rule on this, as it involves not only an unnecessary inquiry for our decision herein, but, insofar as it involves consideration of actual numbers of attackers (x x x x x x x x x x x x x x x x x x

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<sup>264</sup>As is true regarding section 73.1(a)(2), it is possibly because substitution of the word “and” for “or” would produce an awkward phrasing that the drafters of section 73.24(b)(1) used the phrase, “two or more.” With 20/20 hindsight we can say that more precise drafting might in both instances have made use of the word, “multiple,” which would have avoided any ambiguity. We must in any event, of course, interpret regulations as written, which we have done herein.





2005), unless any party petitions the Commission for review in accordance with 10 C.F.R. § 2.786 or the Commission takes review on its own motion.

3. Within fifteen (15) days after service of this Memorandum and Order, any party may seek review by filing a petition for review with the Commission on the grounds specified in 10 C.F.R. § 2.786(b)(4). The filing of a petition for review is mandatory for a party to exhaust its administrative remedies before seeking judicial review. 10 C.F.R. § 2.786(b)(1).

4. Any petition for review shall be no longer than ten (10) pages and shall contain the information set forth at 10 C.F.R. § 2.786(b)(2). Any other party may, within ten (10) days after service of a petition for review, file an answer supporting or opposing Commission review. Any such answer shall be no longer than ten (10) pages and, to the extent appropriate, should concisely address the matters in 10 C.F.R. § 2.786(b)(2). 10 C.F.R. § 2.786(b)(3). A petitioning party shall have no right to reply, except as permitted by the Commission. *Id.*

It is so ORDERED.

THE ATOMIC SAFETY AND  
LICENSING BOARD

Ann Marshall Young, Chair  
ADMINISTRATIVE JUDGE

Anthony J. Baratta  
ADMINISTRATIVE JUDGE

Thomas S. Elleman  
ADMINISTRATIVE JUDGE<sup>267</sup>

Rockville, Maryland  
March 10, 2005 [ORIGINAL ISSUE DATE]

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<sup>267</sup> Judge Elleman was unavailable to participate in the redaction process for this issuance.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Lawrence G. McDade**, Chairman  
**E. Roy Hawkens**  
**Dr. Peter S. Lam**

**In the Matter of**

**Docket No. 30-35321-CivP**  
**(ASLBP No. 05-836-02-CivP)**  
**(Civil Monetary Penalty)**

**ALL TECH CORPORATION**  
**(Pocatello, Idaho)**

**April 27, 2005**

**MEMORANDUM AND ORDER**  
**(Approving Settlement Agreement and Terminating Proceeding)**

Before us is the joint motion of the Nuclear Regulatory Commission (NRC) Staff and All Tech Corporation (All Tech) for approval of a proffered Settlement Agreement in this civil penalty proceeding. The proceeding stems from the NRC Staff's issuance of an order imposing a civil penalty on All Tech in the amount of \$6,000 based on alleged violations of a Commission regulation (10 C.F.R. § 30.9) when, on February 11, 2002, during an NRC inspection, and again on September 15, 2003, during a predecisional enforcement conference, an employee of All Tech failed to provide information to the NRC that was complete and accurate in all material respects *See* Order Imposing Civil Monetary Penalty, 69 Fed. Reg. 76,019 (Dec. 20, 2004). Following a January 10, 2005, request for a hearing filed by All Tech, a Board was appointed on February 2, 2005, to adjudicate this matter. After the appointment of this Board, the NRC Staff and All Tech engaged in negotiations and ultimately agreed to settlement terms

which would, subject to approval of this Board, terminate this proceeding without further litigation.

Under the proposed settlement, All Tech agrees to pay a civil penalty in the amount of \$1,000 and, additionally, the parties have agreed, *inter alia*, that:

1. All Tech violated 10 C.F.R. § 30.9(a) when its employee failed to provide information to the NRC that was complete and accurate in all respects and that All Tech was responsible for the acts of its employees under the law and the terms of its NRC license.
2. All Tech has taken appropriate corrective actions to address the violations and that the violations, in and of themselves, posed no threat to public health and safety.
3. All Tech will undertake the following additional corrective actions:
  - a. Implement a company policy that the Radiation Safety Officer (RSO) and General Manager shall not be the same individual.
  - b. Designate a new RSO and substitute RSO.
  - c. Conduct a training session on the responsibility of All Tech employees to provide complete and accurate information to the NRC.
  - d. Implement a company policy of taking disciplinary action against any employee who provides false or misleading information to the NRC. This policy will be posted on the All Tech office bulletin board for 30 days and will be provided to all new All Tech employees.
4. The NRC Staff will not take any further civil or administrative enforcement action against All Tech based on the matters outlined in the December 10, 2004, Order.
5. This Settlement is limited to the above-captioned civil penalty proceeding.
6. The parties will jointly move the Atomic Safety and Licensing Board for an order approving this Settlement Agreement and terminating the above-captioned proceeding.
7. All Tech will withdraw its hearing request, and further waive its right to a hearing in connection with this matter, and waive any right to contest or otherwise appeal this Settlement Agreement once approved by the Board.

The Commission looks with favor upon settlements. *See, e.g.*, 10 C.F.R. § 2.338; *North Atlantic Energy Service Corp.* (Seabrook Station, Unit 1), CLI-99-28, 50 NRC 291, 293 (1999). In approving a proposed settlement, the Licensing Board is required to “give due consideration to the public interest.” *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC

64, 71 (1994); *see* 10 C.F.R. § 2.203; *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-97-13, 46 NRC 195, 205 (1997). Here, the parties' proposed Settlement Agreement appears to be in accord with the public interest, and there appears to be no reason why it should not be approved. Understanding that once it is approved by this Board the Settlement Agreement will have the same force and effect as an order entered by this Board after a full hearing, and further understanding that all matters required to be adjudicated in this proceeding will be resolved with the entry of this order, the parties have jointly moved this Board for an order approving their Settlement Agreement and terminating this proceeding. Accordingly, the Board approves the Settlement Agreement, incorporates it into this Order as if the Settlement Agreement were set forth verbatim herein, and terminates this civil penalty proceeding.

It is so ORDERED.

THE ATOMIC SAFETY AND  
LICENSING BOARD<sup>1</sup>

Lawrence G. McDade, Chairman  
ADMINISTRATIVE JUDGE

E. Roy Hawkens  
ADMINISTRATIVE JUDGE

Peter S. Lam  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
April 27, 2005

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<sup>1</sup>Copies of this Order were sent this date by Internet electronic mail transmission to All Tech Corporation and the NRC Staff.



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. 70-7004**

**USEC, INC.**  
**(American Centrifuge Plant)**

**May 12, 2005**

The Commission finds that two Petitioners have standing to intervene in this proceeding to license a uranium enrichment facility. The Commission refers the two intervention petitions to the Atomic Safety and Licensing Board for further adjudicatory proceedings. The Commission also resolves or refers to the Board certain procedural questions raised in a number of motions.

**RULES OF PRACTICE: STANDING TO INTERVENE**

In judging whether a petitioner's asserted interests provide a sufficient basis for intervention, the Commission has long looked for guidance to current judicial concepts of standing, which require a concrete and particularized injury that is fairly traceable to the challenged action and likely to be redressed by a favorable decision. The potential for injury must be actual or imminent.

**RULES OF PRACTICE: STANDING TO INTERVENE**

For construction permit and operating license proceedings involving nuclear power reactors, the Commission generally has recognized a presumption of standing to intervene for those persons who have frequent contacts with the area. In nonreactor cases, however, there is no presumption of standing based upon

geographic proximity, absent a determination that the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences. Whether and at what distance a petitioner can be presumed to be affected must be judged on a case-by-case basis, taking into account the nature of the proposed action and the significance of the radioactive source.

#### **RULES OF PRACTICE: STANDING TO INTERVENE**

The Atomic Energy Act authorizes the Commission to accord protection from radiological injury to both health and property interests. Standing may be based upon a genuine property interest located in close geographic proximity to a facility, where there is a significant source of radioactivity and an obvious potential for radiological damage to the property from the facility.

### **MEMORANDUM AND ORDER**

#### **I. INTRODUCTION**

At the outset of this proceeding to license a uranium enrichment facility in Piketon, Ohio, the Commission indicated that it would make threshold standing determinations itself, and that it would refer the petitions of persons with requisite standing to the Atomic Safety and Licensing Board for further adjudicatory proceedings.<sup>1</sup> The Commission has received two petitions to intervene.

One intervention petition is from the Portsmouth/Piketon Residents for Environmental Safety and Security (PRESS). PRESS claims representational standing to intervene, based upon members who live in close proximity to the proposed American Centrifuge Plant and oppose the proposed facility on alleged health and safety grounds. The NRC Staff supports a finding of standing for PRESS. The Applicant, USEC, argues that PRESS has not demonstrated standing to intervene. The other intervention petition is from Mr. Geoffrey Sea. Both the NRC Staff and USEC argue that Mr. Sea has not shown standing to intervene.

For the reasons below, the Commission finds that both PRESS and Mr. Sea have standing to intervene, and we accordingly refer their petitions and contentions to the Board for further appropriate action. In addition to today's rulings on standing, we also resolve or refer to the Board certain procedural questions raised in a number of pending motions.

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<sup>1</sup> CLI-04-30, 60 NRC 426, 429 (2004); *see also* 69 Fed. Reg. 61,411 (Oct. 18, 2004).

## II. ANALYSIS

Under the Atomic Energy Act, the Commission must grant a hearing upon the request of any person whose “interest may be affected by the proceeding.”<sup>2</sup> In judging whether a petitioner’s asserted interests provide a sufficient basis for intervention, the Commission has long looked for guidance to current judicial concepts of standing, which require “a concrete and particularized injury that is fairly traceable to the challenged action and likely to be redressed by a favorable decision.”<sup>3</sup> The potential for injury must be “actual or imminent.”<sup>4</sup>

PRESS is a nonprofit organization whose stated purpose is to protect “economic vitality, environmental quality, health, and justice.” PRESS seeks to intervene in this proceeding as a representative of members who live near the proposed American Centrifuge Plant and have health and safety concerns.<sup>5</sup> PRESS provided statements by several members authorizing the organization to represent their interests in this proceeding. PRESS states that it has “presumptive standing” to intervene because its identified members live near to the proposed enrichment facility.<sup>6</sup>

For construction permit and operating license proceedings involving nuclear power reactors, the Commission generally has recognized a presumption of standing to intervene for those persons who have frequent contacts with the area.<sup>7</sup> In nonreactor cases, however, there is no presumption of standing based upon geographic proximity, absent “a determination that the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences.”<sup>8</sup> “Whether and at what distance a petitioner can be presumed to be affected must be judged on a case-by-case basis, taking into account the nature of the proposed action and the significance of the radioactive source.”<sup>9</sup> Where there is no “obvious” potential for radiological harm at a particular distance

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<sup>2</sup> Atomic Energy Act § 189a, 42 U.S.C. § 2239(a).

<sup>3</sup> *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-98-13, 48 NRC 26, 30-31 (1998) (citing *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995)). See also *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-03-2, 57 NRC 19, 26 (2003).

<sup>4</sup> *Quivira Mining Co.* (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 6 (1998) (quoting *City of Los Angeles v. Lyons*, 461 U.S. 95, 102 (1983)).

<sup>5</sup> See Petition To Intervene by PRESS (Feb. 28, 2005) at 7, 9.

<sup>6</sup> *Id.* at 9.

<sup>7</sup> *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 95 (1993).

<sup>8</sup> *Georgia Tech Research Reactor*, CLI-95-12, 42 NRC at 116; see also *Nuclear Fuel Services, Inc.* (Erwin, Tennessee), CLI-04-13, 59 NRC 244, 248 (2004).

<sup>9</sup> *Georgia Tech Research Reactor*, CLI-95-12, 42 NRC at 116-17.

frequented by a petitioner, it becomes the petitioner's "burden to show a specific and plausible means" of how the challenged action may harm him or her.<sup>10</sup>

At least three of PRESS's listed members reside within a mile of the proposed facility. At that distance, the NRC Staff states that it is reasonable to apply the presumption of standing to PRESS. The Staff explains that "while no specific geographic zone of possible harm has been established for enrichment facility licensing matters, it is reasonable to assume that the 1 mile distance from the proposed site is within the geographical zone that might be affected by construction, operation, or decommissioning of the facility."<sup>11</sup> The Staff accordingly concludes that PRESS has representational standing based upon these three identified members who, because of their proximity to the proposed facility, would "have standing to intervene in their own right."<sup>12</sup>

The Commission agrees with the NRC Staff that there is an obvious potential that those residing within 1 mile of the proposed American Centrifuge Plant may be affected by the construction, operation, or decommissioning of the facility. This view is consistent with our decision on standing in the ongoing *Louisiana Energy Services* proceeding, which like the present case involves a proposed uranium enrichment facility that would use a gas centrifuge process. In *LES*, the Commission considered the representational standing of groups with members living at 2.5- and 4.9-mile distances, respectively, from the proposed facility.<sup>13</sup> Agreeing with the NRC Staff, the Commission stated that petitioners "who live in [such] close proximity to the proposed LES facility" would have an obvious potential to be affected by the facility.<sup>14</sup> Similarly, in an earlier *LES* proceeding from several years ago involving the proposed Claiborne Enrichment Center, the Licensing Board remarked that the petitioner (who had several members residing within 1 mile — in "close proximity" — of the proposed facility) could have relied on a "presumption of injury" from an "accidental release of fission products."<sup>15</sup>

Given that PRESS has at least three members who reside within a mile of the proposed American Centrifuge Plant site, the Commission agrees with the

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<sup>10</sup> See *NFS*, CLI-04-13, 59 NRC at 248 (no presumption of standing for petitioner who owned property 20 miles from proposed site to downblend high-enriched uranium because there was no obvious potential for radiological harm at that distance).

<sup>11</sup> NRC Staff's Response to Petitions To Intervene Filed by PRESS and Geoffrey Sea ("Staff Response") (Mar. 25, 2005) at 9.

<sup>12</sup> *Id.*

<sup>13</sup> See NRC Staff's Response to Petition To Intervene by Nuclear Information and Resource Service and Public Citizen (May 3, 2004) at 6.

<sup>14</sup> See *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-15, 59 NRC 256, 257 (2004).

<sup>15</sup> See *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), Memorandum and Order (July 16, 1991) (unpublished) at 6.

NRC Staff that PRESS has established standing to intervene in this proceeding.<sup>16</sup> The Commission, therefore, refers PRESS's petition to the Licensing Board to evaluate the admissibility of the submitted contentions. We turn next to Mr. Sea's petition for intervention.

Mr. Sea claims to have standing based upon "his past residence and current property interests in Pike County, . . . his past and current occupational interests in the Piketon atomic site" and "his longstanding commitment to historic preservation in Scioto Township and to industrial conversion of the Piketon atomic site."<sup>17</sup> Before considering Mr. Sea's more specific claims, we begin by noting that Mr. Sea's *past* residence and other activities in the area do not bear directly on the standing question before us. Today, we focus not on the past but on whether the proposed American Centrifuge Plant poses plausible risk of *future* injury to Mr. Sea.<sup>18</sup> The same is true of any past occupational interests. Mr. Sea's past activities are relevant only to the extent that they might help substantiate a serious intention by Mr. Sea to frequent the area to a significant degree in the future.

Mr. Sea claims to have a current property interest in close proximity to the American Centrifuge Plant. Specifically, he states that in September 2004 he paid a deposit and entered into a contract for purchase of an approximately 200-year-old house — commonly referred to as the Barnes Home — and its surrounding 87 acres of land. Since then, Mr. Sea entered into two purchase option agreements extending the time to complete the purchase of the property while he has sought to obtain financing. Mr. Sea's intervention papers identified April 6 as the estimated closing date to complete the purchase of the property. In a recent filing, Mr. Sea indicates that on April 15, 2005, he did in fact complete the purchase of the property, and "now has full title to the property."<sup>19</sup> His filing includes a copy of the deed for the Barnes Home.

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<sup>16</sup>Contesting PRESS's standing, USEC argues that the declarations of PRESS members do nothing more than identify the distances of their homes from the proposed American Centrifuge Plant. USEC argues that the ongoing *LES* proceeding is distinguishable because the members of the petitioning organizations in that case "made an effort to particularize how the [LES] plant might adversely affect their interests." See USEC Answer to Petition To Intervene by PRESS (Mar. 23, 2005) at 9. The Commission finds the distinction insignificant. The declarations of the organization members in *LES* contained identical one-paragraph statements depicting the same sort of generalized health and safety concerns (e.g., fear of harm from an accident, waste storage and disposal, and potential impacts to groundwater) that PRESS alleges, albeit in PRESS's discussion of Petitioners and their standing instead of in the individual members' declarations. See PRESS Petition at 10-11.

<sup>17</sup>Petition To Intervene by Geoffrey Sea ("Sea Petition") (Feb. 28, 2005) at 4-5.

<sup>18</sup>See, e.g., *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 564 (1992) (that individuals "had visited" areas at issue and expressed generalized intentions of returning to areas at some point did not support a finding of "actual or imminent" injury).

<sup>19</sup>See Petitioner's Response to Applicant's Motion To Strike Information in Replies by Geoffrey Sea to Answers of USEC Inc. and NRC Staff ("Sea Response to USEC Motion To Strike") (April 18, 2005) at 2.

Mr. Sea describes the Barnes Home as located between a half mile and a mile from the proposed American Centrifuge Plant buildings, the closest residence to the facility. He states that “existing buildings for the American Centrifuge Plant are clearly visible from the back fence line of the property . . . and the new proposed buildings would be even closer.”<sup>20</sup> He notes that the Barnes Home “is in the direction of prevailing winds . . . and of previous offsite migrations of uranium hexafluoride gas, including the large accidental release that occurred in March, 1978.”<sup>21</sup> He further claims that he intends to reside in the Barnes Home and that “in the case of a catastrophic event” he would be “the guy who would get the largest dose.”<sup>22</sup> He stresses, however, that his primary concern is potential harm to the property itself, such as would occur for example, if there were an “explosion” or accident at the American Centrifuge Facility that caused damage to the property.<sup>23</sup> Other stated concerns include “environmental pollution” and “traffic congestion,” and whether provisions of the National Historic Preservation Act have been followed.<sup>24</sup>

In opposing Mr. Sea’s standing, the NRC Staff stresses that “standing based on proximity is only created by residence or by frequent contact, rather than merely owning property.”<sup>25</sup> This is incorrect. The Atomic Energy Act authorizes the Commission “to accord protection from radiological injury to both health and *property* interests.”<sup>26</sup> Thus, a genuine property interest in the Barnes Home is sufficient to accord Mr. Sea standing, given that the home is located within the same distance we already found sufficient as a basis to accord PRESS standing to intervene. In any event, having completed the purchase of the property, Mr. Sea plans to become a resident. He says he is now in the process of moving to the Barnes Home, which will be his “primary and permanent residence.”<sup>27</sup>

At the time he filed his intervention petition, Mr. Sea had not yet completed the purchase of the Barnes property. Therefore, his intervention petition emphasized his property interest as that of holding “equitable title” to the property, and he stressed that he intended to reside at the Barnes Home, and had paid a “substantial sum” as a deposit on the home, and for the extended purchase options and legal fees associated with the home’s purchase.<sup>28</sup> Mr. Sea’s intervention petition, how-

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<sup>20</sup> Sea Petition at 6.

<sup>21</sup> *Id.* at 7.

<sup>22</sup> Reply by Geoffrey Sea to Answer of USEC (“Sea Reply to USEC”) (Mar. 30, 2005) at 10.

<sup>23</sup> Reply by Geoffrey Sea to Answer of NRC Staff (“Sea Reply to Staff”) (Apr. 1, 2005) at 10.

<sup>24</sup> *See* Sea Petition at 10.

<sup>25</sup> Staff Response at 6.

<sup>26</sup> *Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 48 (1994) (citing AEA §§ 103b, 161b, 42 U.S.C. §§ 2133(b), 2201(b)) (emphasis added).

<sup>27</sup> Sea Response to USEC Motion To Strike at 2-3.

<sup>28</sup> Sea Petition at 3, 5, 7.

ever, did not provide copies of the purchase contract and extension agreements. He stated that these were being “withheld for proprietary reasons.”<sup>29</sup> As a result, USEC questioned the authenticity of Mr. Sea’s contractual arrangements, arguing that Mr. Sea’s “claims of ‘equitable title’ cannot be credited when he has chosen to withhold the details that would explain the full extent of his property interest.”<sup>30</sup> It is now apparent, however, that Mr. Sea has completed the purchase of the Barnes property. In practicality, we see no point to further inquiries into whether Mr. Sea in fact has a sufficient interest for standing.<sup>31</sup>

In addition to his property interest, Mr. Sea made several other arguments in support of his standing, including claims that he is a writer currently under contract to write a book about the Piketon, Ohio area, that he intends to write the book “on location,” and that he has had a longstanding research interest in the historic and cultural aspects of the area near the proposed American Centrifuge Plant. Given that we find his property interest in the Barnes Home sufficient for standing, we need not reach whether Mr. Sea’s other claims of contact with the area suffice for standing to intervene.

### III. PROCEDURAL CLAIMS

We last turn to various procedural claims or motions raised by USEC or Mr. Sea. We begin with the USEC claim, made in its answer to Mr. Sea’s petition, that Mr. Sea filed not one but two distinctly different intervention petitions. Specifically, USEC argues that Mr. Sea submitted an initial petition electronically on February 28, 2005, the deadline for the petition, but failed to perfect the service of the petition by mailing the original petition and two copies, as required by 10 C.F.R. § 2.304(f). USEC claims that Mr. Sea also did not provide proof of service, as required by 10 C.F.R. § 2.302(b). USEC therefore claims that this electronically submitted petition should be denied as improperly filed. USEC goes on to claim that the next day Mr. Sea mailed a petition that was not a copy of the electronically sent petition, but a substantially different and effectively second petition for intervention, which therefore should have addressed the factors for late submissions. USEC thus argues that this mailed petition should be denied as late filed.

Mr. Sea, on the other hand, claims that USEC has mischaracterized his submissions, which consisted of a “single filing, with a correction.”<sup>32</sup> Mr. Sea

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<sup>29</sup> *Id.* at 7.

<sup>30</sup> See USEC Answer to Petition To Intervene by Geoffrey Sea (Mar. 23, 2005) at 10.

<sup>31</sup> If a future question arises about Mr. Sea’s property interest, USEC and the NRC Staff can challenge his standing then. See, e.g., *Gollust v. Mendell*, 501 U.S. 115, 126 (1991).

<sup>32</sup> Sea Reply to USEC at 3.

argues that “[a] corrected petition submitted within a day, with two explanatory cover letters, cannot be construed as two separate filings.”<sup>33</sup> Mr. Sea suggests there would have been no reason for him to have mailed both the “uncorrected and corrected” copies of the petition, and further notes that he electronically submitted the corrected version on March 2, 2004, in which case USEC “had a corrected version before they ever would have received the mailed uncorrected version.”<sup>34</sup>

The Commission has compared the two submissions. There do appear to be several additional claims — entire paragraphs — made in the mailed petition, particularly in the section on contentions. Our standing discussion (above) does not consider new material in the mailed petition. The potentially more significant differences in the mailed and initial electronically filed petition relate to Mr. Sea’s contention arguments, where entirely new bases may have been presented in support of certain contentions. Accordingly, in examining Mr. Sea’s contentions, the Licensing Board should consider the arguments that have been presented by USEC and Mr. Sea in regard to the filing of Mr. Sea’s intervention petition. The NRC Staff has taken no position on the propriety of the mailed (“corrected”) petition.<sup>35</sup>

USEC also moved to have the Commission strike arguments on standing allegedly provided for the first time in Mr. Sea’s replies to USEC and the Staff, or alternatively, to allow USEC to file a surreply.<sup>36</sup> The NRC Staff joined in this motion.<sup>37</sup> The arguments made in the USEC motion have been rendered moot, however, by our finding that Mr. Sea has demonstrated standing to intervene based upon his property interest in the Barnes Home, and thus we need not resolve whether other arguments were improperly submitted.

Lastly, we note that Mr. Sea has requested that two exhibits, which were attached to his reply filings and which contain the names of individuals not involved in this proceeding, not be released to the general public.<sup>38</sup> The Board can address this request and take appropriate steps to assure that privacy material

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<sup>33</sup> *Id.*

<sup>34</sup> *Id.* at 4.

<sup>35</sup> Additional filings on this dispute that the Board should consider and as appropriate rule upon include Mr. Sea’s Motion for Leave To Amend Reply to Answer of USEC (April 1, 2005) and attached Amendment to Reply; USEC’s Answer to Motion for Leave To Amend Reply (April 8, 2004); Petitioners’ Reply to USEC Inc. Answer to Motion for Leave To Amend Reply (April 18, 2005); and NRC Staff’s Answer to Motion for Leave To Amend Reply to Answer of USEC (April 14, 2005).

<sup>36</sup> USEC Motion To Strike Information in Replies by Geoffrey Sea to Answers of USEC and NRC Staff (April 8, 2005).

<sup>37</sup> NRC Staff’s Answer to Motion To Strike Information or in the Alternative To File a Surreply (April 14, 2005).

<sup>38</sup> *See* Request for Privacy Protection by Geoffrey Sea (Mar. 30, 2005).



not be made publicly available. It is our understanding that these exhibits have not yet been disseminated to the public, via our ADAMS database or otherwise.

IT IS SO ORDERED.

For the Commission<sup>39</sup>

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 12th day of May 2005.

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<sup>39</sup>Commissioner Lyons was not present for affirmation of this Memorandum and Order. 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:**

**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)**

**May 24, 2005**

On State of Utah's motion for reconsideration, the Board explains why the asserted procedural and substantive deficiencies in its earlier decision are not "of sufficient merit and/or moment to alter the result."

**ADJUDICATORY PROCEEDINGS: PRESENTATION/  
PRESERVATION OF ISSUES**

The issue of "diminished cask shielding," which the State now argues should be litigated, was not presented at any of three key points (during prehearing conferences, in offer of proof at the outset of hearing, or in response to arguments during the hearing) at which it might have been raised and preserved; thus, the matter was not fairly put in issue and is not part of the adjudication.

**LICENSING BOARDS: RESPONSIBILITIES**

Even though the burden to protect its interests falls initially and primarily upon a party, licensing boards are not precluded from taking every precaution to be sure that, after a ruling is made, there is not even a possibility that its full import may be misunderstood.

## **LICENSING BOARDS: AUTHORITY**

Where a safety issue is not part of the formal adjudication, licensing boards — which have no jurisdiction over the NRC Staff's performance of the responsibilities it fulfills outside the hearing process — may nonetheless recommend to the Commission that it consider directing the NRC Staff to examine any record evidence related to the issue and to report its analysis of the issue for such extrajudicial action, if any, as the Commission might deem appropriate.

## **EVIDENCE: EVALUATION**

Reanalysis of crash data for purposes of a sensitivity analysis does not mean data should be excluded as unrepresentative of the overall database; their exclusion would be appropriate only in conjunction with other data set adjustments.

## **TECHNICAL ISSUES DISCUSSED**

The following technical issues are discussed: ductility ratio, engineering and true strain, displacement measures, tensile rupture, aircraft crash impact geometry.

## **MEMORANDUM AND ORDER (Ruling on Reconsideration Motion)**

We have before us the Intervenor State of Utah's March 7 Motion for Reconsideration of our February 24 Partial Initial Decision on aircraft crash consequences. After having received a number of additional pleadings from the parties, and to help us resolve the seemingly serious matters raised by the motion, we heard several hours of oral argument on April 6 from counsel for the State, the Applicant Private Fuel Storage, and the NRC Staff.<sup>1</sup> In that regard, we had previously directed counsel to focus upon specific areas during their oral presentations.<sup>2</sup>

In the February 24 Decision, a majority of the Board (with Judge Lam dissenting) determined that there was less than a one-in-a-million per year likelihood that an accidentally crashing F-16 from Hill Air Force Base would strike one of the

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<sup>1</sup> That argument took place in our Rockville, Maryland hearing room and, so that it could be open to public observation, was structured to avoid explicit reference to Safeguards-protected matters. The opinion we are issuing today has been structured in that same fashion, to avoid releasing two versions (one Safeguards and one public) as we did on February 24.

<sup>2</sup> See unpublished Further Memorandum Regarding Oral Argument (Mar. 30, 2005) at 2, as later modified during an impromptu, untranscribed March 31 conference call, the results of which were reflected in a March 31 e-mail message from the Board Chairman to the parties.

planned 4000 aboveground concrete and steel casks at the proposed facility in a manner that would breach its internal canister (containing spent nuclear fuel rods) and thus release radioactive materials. In NRC terminology, such an unlikely accident is therefore not a “credible” threat to create an excessive radiation dose and thus need not be considered as a licensing hurdle.

As the April 6 Transcript reveals, the reconsideration oral arguments, like the parties’ earlier written filings, focused on two major types of deficiencies that the State thought undermined our February 24 Decision. *One alleged deficiency* involved our giving *no consideration* to a particular consequence of such crashes as *are deemed credible*; *the other* involved our *improperly evaluating* certain technical issues, involving (1) the strength attributed to the stainless steel canister and (2) the calculations derived from the historical F-16 crashes.

More specifically, in seeking reconsideration, the State argued, *first*, that we had neglected to focus on the full results of those accidental crashes that *were* credible and that could, although *not breaching a canister* and releasing radioactive materials, cause enough *damage to the shielding* provided by the outer cask as to cause a consequential increase in radiation dose. As the State sees it, it was entitled to, but was being deprived of, the opportunity to demonstrate that an important consequence would flow from the diminished shielding provided by a damaged cask, i.e., that the spent fuel’s ongoing emission of neutron and gamma radiation, which passes through even an intact canister’s walls,<sup>3</sup> would lead to post-accident radiation doses so much higher than the doses calculated with shielding in place that they would exceed regulatory standards.<sup>4</sup>

The State went on to argue, *second*, that we had erroneously resolved two concerns on which we *had* focused. The first involved the manner in which we determined the strength of the canister without regard to a “ductility ratio” reflected in, and recommended by, a U.S. Department of Energy standard upon which the State relies.

The second involved our analysis of the historic F-16 crash data: on the one hand, we *had included* certain historic crashes that the State claims all parties had agreed *should be excluded* for purposes of determining the likelihood that a crash would exceed the “bounding impact” that a canister can withstand; on the

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<sup>3</sup> As distinguished from the radioactive fission products that might escape from a punctured canister, or from those charged particles that would be captured by the canister walls.

<sup>4</sup> As part of its March 29 reply to the other parties’ responsive filings, the State asserted (at 3 n.6) that we did not provide in our February 24 Decision any citation to those standards. It might have improved the clarity of that decision for us to have provided specific citations to those standards, notwithstanding that we had previously provided such citations in our 2003 decision (*see* note 6, below). Instead, we cited them only generally on February 24 (in note 52 of Part II, at B-1 of the Safeguards version). Given the probability-driven result we reached on February 24, there was no need to apply the dose-consequences content of those standards, and thus no need to cite them more specifically at that point.

other hand, we *had not included* in our probability calculation the effect of those crashes that the State urged could hit the top of a cask in a manner such that, while not causing a breaching *top* impact to the initial cask, would result in the aircraft skipping off and causing a breaching *side* impact to an adjacent cask.

The State's request for reconsideration appropriately brought to our attention significant points, outlined above, that were not specifically addressed in our February 24 Decision. For that reason, we have given the State's motion great heed, including calling for oral argument to clarify the parties' respective positions.

Having reexamined the matters raised, and reevaluated the procedural steps taken and the substantive evidence adduced in creating the record, we *find ourselves unconvinced that the asserted procedural and substantive deficiencies to which the State points are of sufficient merit and/or moment to alter the result*. We are constrained, then, not to grant the State the relief sought.

Our reasons for adhering to our earlier result are set out below. In Part I (pp. 322-31, in which Judge Lam joins), we explain why the scope of the proceeding did not extend to examining increased radiation doses attributable to loss of shielding. Out of an abundance of procedural caution, however, we do include in Part I (pp. 330-31) a suggestion to the Commission of a method by which, if it chooses, the "loss of shielding" question could, in our view, be readily addressed. In Part II (pp. 331-41, in which Judge Lam does not join), we address the questions related to ductility ratio and crash analysis.

The question as to whether to issue the requested license was initially put before the Commission by our February 24 Decision and has already been briefed. As we note in the Part III Conclusion (pp. 341-43), our decision today as to reconsideration interposes no barrier to the Commission's now addressing that question.

## **I. ASSERTED FAILURE TO MAKE NEEDED DETERMINATIONS**

For the third time, this Board must resolve an issue — stemming from the so-called "probability/consequences" risk analysis dichotomy — about the nature and scope of the accidental aircraft crash hearing. On the two prior occasions, that dichotomy — initially thought of as a simple one<sup>5</sup> — led to a ruling, one against the Applicant and one in its favor, limiting the scope of the evidence that would be received at the then-impending session of the hearing.

Those two rulings not only had a major impact on the earlier course of the proceeding but also serve to inform our current decision. Accordingly, we

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<sup>5</sup> *But see* note 110 in LBP-03-4, 57 NRC 69, 136-37 (2003) (reprinted in note 6, below), which presaged complexity.

review them briefly here to provide necessary background and context for today's decision that *shielding loss was not fairly put in issue at this stage and thus was not, and will not be, part of the formal adjudication.*

At the very outset of the hearings in Salt Lake City in April 2002, we were confronted with motions *in limine* that focused our attention on whether those original hearings should involve only those questions that related to accident probabilities, not those involving their consequences. *See* the April 8, 2002 Tr. (of oral argument) at 2981-3008. After oral argument, we determined, based largely on the posture of the case, but also in some measure on the paucity of the evidence being proffered as to consequences, to limit the 2002 hearings to the issue of probability. We explained that ruling orally at the time (Tr. at 3008), and elaborated on it nearly a year later in the course of our decision on the question of the probability of a crash into the site. *See* LBP-03-4, 57 NRC at 136-41.<sup>6</sup>

On the merits, we held then that the probability of a crash into the *site* was too high to allow licensing of the proposed facility at that juncture. Looking ahead, we expected that the next hearing would involve a full exploration of all the potential "consequences" of such a crash.

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<sup>6</sup>We set out here at some length the introduction to the subject that we there provided:

Under the Commission's site evaluation regulations (covering nuclear reactors and adapted for spent fuel storage facilities), an applicant must show that if a credible accident were to occur, the consequences would not result in the release of radioactivity that would cause doses in excess of 10 C.F.R. Part 100 guidelines. *See* 10 C.F.R. §§ 72.90, 72.94, 72.98, 110.10; NUREG-0800 at 3.5.1.6-2; Campe/Ghosh Post Tr. 4078, at 4-6. As a *legal* matter, then, the ultimate focus is on a unified question, i.e., the probability of an accident that would lead to radiation doses beyond Part 100 [limits].

As a *practical* matter, however, the regulatory focus and approach often turn out to be on that unified question but on one of two separate, subsidiary issues, either of which can be determinative in particular circumstances. Specifically, if it can be shown that the likelihood of the triggering accident is so low that the accident can be discounted as not credible, there is no need for an inquiry into whether the radiation dose consequences would be excessive if the accident were to occur. At other times, the opposite approach is taken — an applicant will assume the accident would occur, but will attempt to demonstrate that even if the event happens there would be no dose consequences. Usually, this would be because the facility's "design basis" is shown to be such that it can withstand the postulated accident, or mitigate it adequately.

57 NRC at 136 (footnotes omitted). We followed that discussion of the probability/consequences dichotomy with an early indication that the issues could split a different way (*id.* at 136-37 n.110):

[W]e note the categorization of the issue regarding cask penetration is a gray area that depends on how the "accident" is defined. Thus, cask penetration was spoken of on a few occasions as constituting part of the "accident probability" question (when the accident is defined as cask *breach* by a crashing aircraft), and on other occasions as part of the "dose consequences" evaluation (when the accident is defined, as it most often has been here, as cask *impact* by such an aircraft).

In effect, this footnote foretold how the second phase would emerge.

Those expectations proved oversimplified. The Applicant — which had the burden of proof — eventually indicated that it wished to attempt to demonstrate only that a crash into the site would be highly unlikely to have the *intermediate physical consequence* of puncturing a spent-fuel-containing canister. The Applicant's approach counted on thereby establishing that a crash that would puncture a canister had a sufficiently low probability that it could be disregarded for licensing purposes. The Applicant recognized that in thus eschewing a hearing on the *ultimate dose consequences* of the radiological releases caused by such a puncturing event, it was foregoing another potential near-term opportunity to prevail,<sup>7</sup> and it was informed that it might also be passing up that opportunity permanently.<sup>8</sup>

Rather than proceed, then, to a second phase of the hearing that would fully examine overall consequences, we were being asked by the Applicant, with the Staff's support, to take up a hybrid "probability of intermediate consequences" issue that might prove determinative. The State vigorously opposed the Applicant's proposed approach, and we devoted considerable attention to determining which hearing course to follow. *See* unpublished Memorandum Concerning Scheduling (Apr. 15, 2004) at 2-3 (summarizing conference calls of March 30 and April 8, 2004), and Transcript references contained therein.

As was recounted at the time (Apr. 8, 2004 Tr. at 14,659-61), and in our recent Decision based on the ensuing hearing,<sup>9</sup> we adopted the Applicant's approach

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<sup>7</sup>That is, the Applicant was foregoing the opportunity to establish that the accident of concern (crash-induced canister puncture), even if it occurred, would not occasion releases sufficient to lead to radiological exposure in excess of the regulatory standard, and for that reason would not have to be considered an element of the proposed facility's "design basis."

<sup>8</sup>*See, e.g.*, Feb. 24, 2004 Tr. at 14,515-16; Mar. 30, 2004 Tr. at 14,615-22; and final paragraph of note 10, below.

<sup>9</sup>We discussed there at some length the different approaches urged upon us (Feb. 24 Decision at A-15, A-16):

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 [was so low that it] left an MPC breach as a non-credible 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 more precisely [be] 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

*(Continued)*

for the most practical of reasons: if the Applicant's approach to the question of intermediate consequences prevailed (in establishing a sufficiently low probability of canister puncture), there would be no need to devote considerable time, resources, and attention to a thus-mooted ultimate question, i.e., the radiological consequences of a puncture.

In following that course, we did provide the State the opportunity to make an offer of proof as to those radiological consequences. The State indeed exercised that opportunity.<sup>10</sup>

To repeat, after considering all the evidence, we determined on February 24 of this year that the Applicant had in fact prevailed on its theory that the probability that a crashing plane would puncture a canister (and thus cause direct release of radioactive products) was less than one-in-a-million per year and therefore that such a canister puncture was not a "credible" event, with the result that its radiological consequences did not have to be examined. We thought that ended the matter (subject, of course, to Commission and judicial review).

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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.*

\* \* \* \*

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. 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.

<sup>10</sup> Those actions and others we took were later described in our February 24 Decision (at A-15-16):

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, time-saving decision to have the hearing focus on only the second factor. 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 [speaking for himself only] 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 [emphasis added].



But the State sought reconsideration, arguing that we had, in effect, found that the “bounding impact” crash would, although not puncturing the canister, assuredly cause *some* damage to the outer cask, thus inexorably reducing its shielding capability. As the State sees it, our earlier ruling — that ultimate radiological consequences were not to be considered at the 2004 hearing — necessarily carried with it the corollary that the State would be *entitled to be heard on those consequences* if that 2004 hearing did not moot the issue.

Pursuing that line of reasoning, the State says we should not have allowed the proceeding to end with our February 24 Decision’s implied “shielding reduction” finding. Instead, the State argues, we should on our own have recognized therein, and should now direct, that there must be another stage to the proceeding, i.e., one in which the State has the opportunity to demonstrate that the reduction in shielding attendant to the “bounding impact” crash — which is on the margin of being a “credible” event — leads to an increase in the radiation dose (principally from gamma rays and neutrons passing through the unpunctured canister and the diminished shielding) that exceeds the regulatory maximum at the prescribed boundary. If the Applicant could not defeat that State showing, concludes the argument, the “bounding impact” crash, or one close to it, would have to be recognized as an event against which the facility must be designed to qualify for a license.

The State’s reasoning has merit as a theoretical construct. What it overlooks, however, is the manner in which this proceeding developed, which, as we see it, *led to a general recognition that the issue the State thinks should now be litigated was never presented and was assuredly not one of those that was kept alive.*<sup>11</sup>

We set out below why we come to that conclusion. Although we find that the State did not take the steps needed to pursue the “diminished shielding” radiation dose issue in the hearing process, *we go on to recommend to the Commission an extrajudicial means available to it (but not to us) to insure that the issue is examined if, in its view, such attention is warranted.*

Our analysis starts with the fundamental manner in which NRC hearings are structured. While an applicant has the ultimate burden of proof on any issues upon which a hearing is held, hearings are held on only those issues that an intervenor brings to the fore. And the burden of going forward on any issues that make it to the hearing process is on the intervenor that is pursuing that issue.<sup>12</sup>

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<sup>11</sup> As the State correctly points out (Motion at 2), the issue of diminished shielding *was* litigated and decided in the *seismic* phase (*see* p. 329, below). The State incorrectly, however, sees resulting inconsistency in our rulings. The question is not whether diminished shielding *may* be raised (it may), but whether it *was* raised. In this phase, unlike in seismic, it was not.

<sup>12</sup> That an issue does not for whatever reason become part of the hearing process does not mean that it receives no agency attention, for all matters are supposed to be addressed by the NRC Staff

(Continued)

In this proceeding, the State brought the “credible accidents” contention and pursued it in the preliminary stages of the proceeding in the face of the Applicant’s motions to dismiss and for summary disposition. Through that process, the precise shape of the contention was altered a number of times, as we recounted in our recent February 24 Decision (at A-4). Eventually, the contention went to trial, and the State’s evidence adduced during the 2002 hearings carried the day on the “probability” aspect of the contention. Our March 2003 ruling on that aspect (LBP-03-4) precluded then awarding the Applicant the sought-after license.

After that ruling, we moved into the so-called “consequences” phase. The State argued that our consideration of that aspect should await the filing of an amended application by the Applicant and a responsive contention by the State (see Mar. 30, 2003 Tr. at 14,586-87; “Second Joint Report” (Apr. 30, 2003), at 8-9). Mindful, however, of the Commission’s expectations as to expedition (see May 29, 2003 Tr. at 13,873-75 (referring to CLI-03-5, 57 NRC 279, 284-85 (2003)), we allowed the proceeding to move forward on the existing application and contention.

For some time, we expected to hear the full range of “consequences” issues, including those involving the impact of a crash on the cask/canister combination and those involving the resulting radiological impact. See LBP-03-4, 57 NRC at 136-37 n.110; unpublished Memorandum Concerning Scheduling (Apr. 15, 2004) at 2. As the matter unfolded, however, the Applicant suggested the deferral of the purely radiological part of the “consequences” issue (*ibid.*; see also p. 324, above).

The manner in which that suggestion was presented and addressed is both instructive and determinative. *During the entire time the matter was under discussion, the question of diminished shielding never arose.* Rather, the discussion was launched by, and centered upon, the Applicant’s belief that it could establish there would be no “cask breach,” which in the “either/or” context in which that discussion took place was apparently recognized by all to mean a puncture of the internal canister.<sup>13</sup> For such a puncture could release radioactive fission products if it did occur, while if no puncture occurred, no such substances would

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in the standard performance of its regulatory review. We draw upon the existence of this system in suggesting, later herein, a measure for Commission adoption.

<sup>13</sup>As we pointed out at the oral argument (Tr. at 19,717), the word “shielding” was never used during the critical prehearing conference. [To be sure, the word “canister” was used only infrequently, but in context “cask breach” was there understood to mean “canister puncture,” a usage that prevailed at the later hearing (see Tr. 15,677-78, 19,717).] In response to our several requests at the oral argument on the motion for reconsideration, the State did not point to a single hearing-record instance where it focused on site-boundary radiation doses arising out of a reduction in shielding. See, e.g., Tr. 19,718-19.

be released (and neither their magnitude nor their dose consequences would thus need be considered).<sup>14</sup>

Seeing that matter, then, as an “either/or” proposition, it made sense to us to defer the radiological consequences issue until we reached a decision on the canister puncture issue, which had potential to — and indeed did — moot the entire radiological issue. In contrast, the question of diminution of shielding is not an “either/or” matter — it is instead a matter of degree.

Had the shielding matter been brought before us to determine whether it should be deferred, the prehearing discussion would have been entirely different — it would not have focused on the potential for efficiencies to be gained through mootness, for the matter could not be mooted (although we might have deferred it on other grounds). Put another way, unlike the situation with the canister puncture issue, it would have been abundantly clear that, as to the reduced shielding, a third phase of the hearing was inexorably going to be required, and that factor would have been crucial in a decision whether to undertake that phase then or later.

But *such a discussion never took place* — and we view its absence as an important indicator or identifier of what we and the parties recognized was remaining at issue. Put simply, the State — whose “credible accidents” contention was what underlay the proceeding — did not respond to the Applicant’s deferral suggestion in a manner that indicated any intention whatsoever that the likelihood or the consequences of “diminished shielding” be considered an ongoing part of that contention. In that fashion, the State implicitly acknowledged that its contention, reshaped many times previously,<sup>15</sup> had since become focused only upon those aspects relating to, or stemming from, canister puncture.

This apparent acknowledgment was then confirmed by the content of the State’s offer of proof as to the “radiological consequence” matters that, having been deferred, were excluded from the second phase. That offer of proof put forward material bearing *only* on radiological releases escaping from (or criticality stemming from) a punctured canister, and made no mention of the possibility of increased radiation resulting from diminished shielding.

The hearing’s limited scope, defined at the prehearing stages and confirmed by the offer of proof at the outset of the hearing itself, was in effect reconfirmed *during* the hearing. In response to Board questions about possible untoward crash consequences other than those resulting from a canister puncture, counsel for the Applicant argued forcefully that the only matter at issue in this hearing was whether an F-16 crash would breach a canister. *See* Tr. at 15,674-84. If the State

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<sup>14</sup> Similarly, as to the “criticality” issue, the intrusion into the canister of water (from firefighting equipment) that might serve to moderate a chain reaction could take place if and only if the canister were punctured.

<sup>15</sup> *See* Feb. 24 Decision at A-4-5.

believed that loss of shielding remained to be considered (despite the prior indicia that it was not), it should have taken that “last clear chance” opportunity to say so.

In short, the State failed at any point to put specifically in issue the concern it now expresses about reduced shielding. *See generally Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. 519, 553-54 (1978). Perhaps the State believed that such an argument was evident from its overall presentation. But we hold that neither we nor the State’s opponents had notice of the need to address that theory.

Accordingly, we adhere to the course taken in our February 24 Decision, which focused only on canister puncture — for the State did not preserve any aspects of its contention as might have *required a Board decision then* addressing the degree to which shielding is diminished, or as would have *preserved the State’s opportunity now* to demonstrate the extent of the resulting dose increase. As far as this adjudication is concerned, those matters are not in issue.

Having said that, and even though the burden of preserving the scope of its contention rested upon the State, it might have been more clear, although not required, had the Board not merely ruled upon the scope of the hearing, but also had gone on to define more precisely and expressly the outlines of, and limits upon, the issues. Although it is incumbent upon a party to act to protect its rights, there is no bar to a Board’s taking every precaution to be sure that, after a ruling is made, there is not even a possibility that its full import may be misunderstood. Here, we might have redrafted the contention once again and obtained the parties’ agreement that it specifically and accurately reflected all the matters that would be the subject of the hearing.

That applies even where, as here, the expressed emphasis on the major concern about canister puncture and resulting releases would have tended to minimize focus on, or concern about, the lesser problem of diminished shielding and the resulting reduction of protection against gamma and neutron radiation. In that regard, the lack of expressed concern about the extent to which a cask’s shielding would be diminished (without canister puncture occurring) appeared fully consistent with our earlier opinion on seismic matters herein, where we held that an acceptable approach to remediating such a reduced shielding situation, before unacceptable radiation doses are incurred, may be a very simple one — erecting temporary shielding to buttress the compromised shielding. *See LBP-03-8, 57 NRC 293, 369 (2003)*.<sup>16</sup>

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<sup>16</sup>We held there that, for purposes of calculating radiation dose consequences in a slow-developing post-accident situation, an applicant can “take credit for a contingency plan” through which it would “take whatever steps are necessary to mitigate the situation — such as by building a protective berm

*(Continued)*

This proceeding has been underway a long time. Although we are convinced that in all the circumstances we fairly delimited the scope of its final stage, it might be prudent, after so much time and effort has been expended, not to leave unaddressed at the end the merits of any lingering concern the State may now be expressing about the full effects of the “bounding impact” crash. Happily, there is a way — albeit an extrajudicial one — through which that matter might be readily addressed.

Specifically, the Staff indicated at the recent oral argument that, as part of its continuing regulatory responsibilities (*see* note 12, above), it might well examine the reduced shielding matter independent of the reconsideration outcome (April 6 Tr. at 19,781-83). As has long been the recognized rule, licensing boards have no jurisdiction over the Staff’s performance of such responsibilities as it fulfills outside the hearing process.<sup>17</sup> But the Commission does.

The examination the Staff referred to would not appear to be a major undertaking for, in the course of addressing crash impact, the parties adduced evidence that, while directed to canister effects, necessarily also examined, in depth, physical damage to the overpack. *From that evidence one could, in our view, readily determine any accompanying reduction in shielding capability and the consequences thereof.*<sup>18</sup>

Accordingly, *we respectfully suggest to the Commission that, independent of this adjudication, it consider directing the Staff (1) to do as it said it could and examine “the evidence that has been presented . . . in order to ensure public health and safety protection” in regard to the diminished shielding and any accompanying projected increases in site-boundary radiation doses (see Tr. at*

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or by evacuating the surroundings . . . .’ In accordance with that principle, had the State been successful here in pressing for a third phase of the hearing related only to shielding, the evidentiary presentations might well have focused on, among other things, the feasibility and effectiveness of any post-accident-erected barriers the Applicant might plan to utilize to replace the reduced shielding being provided by a damaged cask.

<sup>17</sup> *See New England Power Co.* (NEP, Units 1 and 2), LBP-78-9, 7 NRC 271, 278-79 (1978); *Curators of the University of Missouri*, CLI-95-1, 41 NRC 71, 121 (1995); *Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-6, 59 NRC 62, 74 (2004).

<sup>18</sup> Indeed, with that evidence available for scrutiny, and in light of the Staff’s expressed intentions, *we asked the Staff and the Applicant* (Tr. at 19,756, 19,760-61, 19,767, 19,774, 19,778-80) *whether they wished to have the opportunity to respond to the State’s complaint*, before we ruled on it, by *filing affidavits* reflecting their view of the radiation dose increases that might result from different degrees of shielding reduction reflected in the evidence (the State would, of course, then have had the opportunity to file a countering affidavit). *The Staff and Applicant both turned down our offer* (Tr. at 19,763, 19,768, 19,775, 19,805-06), making it impossible for us *on this record* to determine whether the matter is significant or not. *Cf. generally Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-124, 6 AEC 358, 364-65 (1973), reflecting an analogous test for reopening a record on a new issue, and Apr. 6 Tr. at 19,797-98.

19,782-83), and (2) to report to the Commission on the results of its analysis.<sup>19</sup> That would put the Commission in position, after receiving the views of the Applicant and State if it desired, to assure itself about the significance, or lack thereof, of the diminished shielding, and to direct such followup proceedings, if any, as it might deem appropriate.

We are aware of no reason why this extrajudicial activity, if undertaken at the Commission's behest, would need affect the Commission's determination as to whether to issue the requested license, a matter that our February 24 Decision put before it and which is unchanged by our decision today.<sup>20</sup> Even if the license were to be issued, no spent fuel could arrive at the PFS site for a considerable period, and thus there would be no conceivable danger to the public related to accident-diminished cask shielding while only the site infrastructure was under construction. Of course, such construction, like any a licensee undertakes pending Commission and judicial review, would be at its own risk,<sup>21</sup> a risk ordinarily substantial enough that we suspect it would not be materially affected by the additional pendency, outside of the formal adjudication, of the diminished shielding matter.

## II. ASSERTED ERRONEOUS DETERMINATIONS

As set forth in the introduction (pp. 321-22, above), the second major thrust of the State's motion involved challenges to the manner in which we evaluated certain technical issues. The State's argument about the strength we attributed to the stainless steel canister is addressed in Section A, below (pp. 332-33), while its arguments about our analyses of the historical F-16 crashes are addressed in Section B, below (pp. 333-41).

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<sup>19</sup> Given the posture of the case and the State's interest (albeit belated) in pursuing this issue, we elect not simply to refer the matter to the Staff for study, as might be done in circumstances different from those presented here. See *Florida Power and Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-91-13, 34 NRC 185, 188 (1991) (no intervenors left in case). Our more formal suggestion here is more consonant with what has gone before and with the State's ongoing participation, and puts the Commission in position to insure the matter is brought to a speedy conclusion, if it believes any further inquiry would be worthwhile.

<sup>20</sup> Our suggestion to the Commission is less unorthodox than it may at first appear, when measured against the somewhat analogous situations in the NRC's Rules of Practice which allow licenses in some types of proceedings to be issued prior to — but subject to the outcome of — evidentiary hearings yet to be scheduled. See 10 C.F.R. [former] § 2.1205(m) and [current] § 2.1202(a).

<sup>21</sup> See *CFC Logistics, Inc.*, LBP-03-16, 58 NRC 136, 147-48 (2003).

### A. Using Physical Properties to Determine Criterion for Canister Failure

The State posits that the Board overlooked critical evidence in determining that the DOE Standard's selection of a particular ductility ratio is unrelated to the case at hand. The State argues, once again, that we 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 here would fail in tension.

In our February 24 Decision, we foreswore reliance upon *any* Code-delineated prescriptive formula for determination of failure in this sort of examination.<sup>22</sup> In doing so, we expressly rejected the criteria prescribed by either the DOE Standard or the ASME Code.<sup>23</sup> The State now suggests that our Decision "relied" upon: (a) a standard set out in Table Q1.5.8.1 of the ANSI/AISC Standard; (b) the premise that the DOE Standard was developed with a clear focus upon "structural" members made of carbon, not stainless, steel; and (c) the belief that the DOE standard was developed to assess the ability of a structural member to continue to perform its structural function.

Although we indeed noted that the latter two of those factors supported our ultimate conclusion, our decision rested on a more basic, clearly enunciated rationale — that the determination of the conditions that cause failure in tension of the steels at issue, in the sort of circumstances at issue in the analysis we must make,<sup>24</sup> is most appropriately based upon examination of the actual physical properties of these steels under the sorts of loadings expected.<sup>25</sup> Nothing the State now presents causes us to depart from that approach.

Indeed, a proper understanding of the ductility ratio concept confirms, rather than undercuts, the validity of our earlier conclusion. Specifically, a ductility ratio is simply a measure of the displacement observed under particular conditions compared to the maximum elastic displacement that could occur in the particular material at issue.<sup>26</sup> Such a ratio may be computed for any circumstance; it was posited by the State that a ductility ratio of approximately 20 (which corresponds to a true strain on the order of 2.5%), selected as a criterion for failure in the

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<sup>22</sup> See Feb. 24 Decision at B-16 (all "B"-page references are to the Safeguards version).

<sup>23</sup> See *id.* at B-17, B-18.

<sup>24</sup> The issue before us involved at what point the crash-induced forces would puncture a canister (as stressed in Part I, above), not (1) what other types of nonpuncturing damage those forces might inflict on a canister or (2) how a canister might perform against those forces if it were intended to serve other purposes than as a barrier to releases.

<sup>25</sup> See Feb. 24 Decision at B-17–18.

<sup>26</sup> See State Exh. 254, United States Department of Energy Standard (DOE-STD-3014-96), *Accident Analysis for Aircraft Crash into Hazardous Facilities* (Oct. 1996) at 76.

DOE Standard, should be used categorically as a proper measure for failure of the steels at issue under the circumstances of these accidents.<sup>27</sup>

The testimony of the Applicant and Staff experts, however, indicated that the stainless steel at issue here would not fail in tension under the types of dynamic loads computed to be incurred until true strain reached more than 90%,<sup>28</sup> and that the carbon steel at issue would not fail until true strains reached not less than 69%.<sup>29</sup> Those strains correspond to ductility ratios vastly in excess of the 20 proposed by the State (which corresponds to a strain on the order of 2.5%): in that regard, Staff witness Bjorkman indicated that *the ductility ratio* corresponding to a 69% failure true strain *would be on the order of 250*.<sup>30</sup>

To be sure, no witness in testimony, or party in pleadings, proposed or suggested *an appropriate numerical value for the ductility ratio which would indicate the type of tensile rupture failures of interest in this situation*, namely the failure of a canister to maintain the integrity of its external boundary against releases of its internal contents. Therefore, while *we might indeed have employed the ductility ratio concept had an appropriate one been presented* (based on experimental data about the type of tensile failure of concern), there 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 peculiar type of failures at issue here. Instead, we turned to the actual physical properties of the stainless steel, and experimental evidence about it, to make the appropriate determinations.

For the foregoing reasons, we deny the State's motion to reconsider our ruling as it related either to use of the DOE Standard or the ASME or AISC Code provisions, or to use of the numerical value of the ductility ratio proposed by the State as a failure criterion for these analyses. We turn now to the State's arguments about our analyses of the aircraft crash data.

## **B. Analyzing F-16 Crashes To Determine Probability of Canister Puncture**

The State argues that the Board misapprehended evidence that, viewed properly, shows the so-called "unanalyzed event probability (UEP)" from aircraft crashes is higher than we concluded.<sup>31</sup> Specifically, the State claims that the Board-determined UEP for aircraft crashes into the casks fails to incorporate

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<sup>27</sup> See Feb. 24 Decision at 12 (citing Tr. at 16,514-16 (Sozen)).

<sup>28</sup> See Tr. at 16,006, 16,010, 19,598-99 (Bjorkman); *see also* Feb. 24 Decision at B-13.

<sup>29</sup> See Tr. 16,825, 16,850-52, 16,860, 16,888, 16,893, 19,598, 19,599 (Bjorkman).

<sup>30</sup> See Tr. at 16,863-66. *See also* Apr. 6 Tr. at 19,934-44.

<sup>31</sup> State's Motion at 5.



two elements which, when taken together, would increase the overall UEP to an amount in excess of the one-in-a-million per year criterion (referred to herein by the scientific shorthand notation of “ $1.0 \times 10^{-6}$ ”) and thus turn a crash exceeding the previously determined “bounding impact” into a “credible accident.”

First, the State categorically claims that the parties have agreed that seven crashes, which it characterizes as takeoff and landing crashes, should be eliminated from the data, and that we therefore erred in including them.<sup>32</sup> We explain briefly in subsection 1, below, why this claim is at least partly, and perhaps entirely, erroneous, and even if it had any underlying validity, would be immaterial.

Second, the State suggests that aircraft crashes cannot simply be divided, as the Applicant and Staff did, into two categories: those initially impacting the tops of casks and those initially impacting their sides. As the State sees it, some high-speed crashes that occur at angles close to the horizontal could make a primary grazing impact on a cask top and glance off — with no appreciable damage to that cask or to the aircraft — and then go on to impact the side of a second cask, with the possibility of causing appreciable cask damage that was not factored into our earlier Decision (which would have considered such a crash simply as a nondamaging top impact).<sup>33</sup> Because we did not directly address in our February 24 Decision this narrow but important point as to how to categorize crash angles and impacts for analytical purposes, we now give it considerable attention in subsection 2, below.

### ***1. The Inclusion of Seven Assertedly Questionable Crashes***

The State argues that the Board improperly included seven accidents in the flight crash data set. The State claims that the State and the Applicant agreed that, along with the four runway-related accidents that were excluded to bring the data set down from sixty-one to fifty-seven crashes, an additional seven crashes should be excluded because all parties agreed that they cannot reasonably occur in Skull Valley.<sup>34</sup> As a result, the State argues, we erred in not excluding the seven accidents from the database. Elimination of those seven low-speed crashes, says the State, would cause the probability of an impact speed greater than the bounding event to be increased from 15.8% to 18%, thus increasing the Board-determined UEP.<sup>35</sup>

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<sup>32</sup> See *id.* at 7-8.

<sup>33</sup> See *ibid.*

<sup>34</sup> See State’s Motion at 7-8 (citing Applicant Exh. 319, Dr. C. Allin Cornell, “Treatment of F-16 Accidents Sought To Be Excluded from Use in Crash Impact Speed and Angle Frequency Distribution Determination by the State of Utah” [hereinafter Applicant Exh. 319]).

<sup>35</sup> See *id.* at 8.

Neither the Applicant nor the Staff supports the State's claim that the parties agreed that the seven accidents should be excluded.<sup>36</sup> On the contrary, the Staff points out that the exhibit referenced by the State was an expert's sensitivity study that, at our request, reevaluated *all* the data points. For purposes of that particular study, the Staff notes, the Applicant's expert Dr. Cornell did not conclude that the seven low-altitude events at issue here *should* be excluded, but that *if* that were done it should be in connection with a reanalysis of the entire data set, including weighting flights according to the Skull Valley flight patterns.<sup>37</sup> He went on to state that "we maintain that our original approach, which included all Skull Valley Type Event accidents without need for selecting or weighing accidents by altitude, is appropriate . . . ."<sup>38</sup>

Thus, the State's proposition that the parties all agreed to eliminate the seven crashes misconstrues their positions. The very exhibit referenced by the State shows that the Applicant had taken a different position: in response to our request that the parties provide alternative data sets — with exclusion criteria different from the ones used for their previously submitted data sets — the Applicant reexamined all the aircraft crash data and its approach to analysis of those crashes. As a result, the Applicant suggested that an appropriate reanalysis might incorporate two new approaches: *both* the *elimination* of *particular* low-speed crashes *and* the *weighting* of the probabilities of *all* crashes to reflect the fact that only 4% of Skull Valley flights take place in the Sevier D flyway (which goes from 5000 feet above ground level (AGL) to 14,000 feet AGL) while 96% are in Sevier B ( which goes from near the desert floor up to 5000 feet AGL, with F-16s generally flying between 3000 and 4000 feet AGL there).<sup>39</sup>

The Applicant's rough estimate of the effect of such a reanalysis was that it would yield a UEP not materially different from the one initially presented. In that reanalysis, the elimination of low-speed crashes was expressly coupled with another measure reweighting the remainder, so the State's suggestion — that the Applicant had "agreed" simply to eliminate the crashes from the earlier analysis — is not a fair characterization of what occurred.

In addition, it is important to recognize that these seven crashes were all initiated by types of engine problems that could have happened in Skull Valley, and then involved the pilots taking some last-minute actions at low speed and relatively low altitude. To remove these accidents from the data set because of those actions, or because they occurred at low altitudes, would distort the historical results that provide the foundation for predicting the future. There is

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<sup>36</sup> See Applicant's Response at 7-8; Staff's Response at 8.

<sup>37</sup> See Applicant Exh. 319 at 1.

<sup>38</sup> *Id.* at 8; see Staff's Response at 8.

<sup>39</sup> See Applicant Exh. 319 at 1-2; State Exh. 242, Lt. Col. Hugh L. Horstman, "Evaluation of Impact Velocity and Impact Angles for F-16 Crashes at the Proposed PFS Site," at 1.

simply no reason to believe that, even without such activity, the crash speed would not be in the same low-speed range as most loss of engine power crashes, or would vary materially from the F-16's relatively low speed when the pilots took those actions.

Put another way, while it is possible that the pilots' actions caused the crash speeds to be somewhat different than might have occurred without those actions, these seven events are fairly representative of one end of the range of crash scenarios; to remove them entirely from consideration would inaccurately shift the predicted probability distribution toward higher speeds. Perhaps, because of the pilots' actions, these seven events should have been used in a different manner in the regression analysis. No such reanalysis was, however, provided to us, and, in any event, there is no reasonable basis to conclude that such a reanalysis could increase the probability of a crash impact above the bounding event impact speed and thereby shift the UEP. For all these reasons, we reject the State's arguments that all parties "agreed," or that we should have determined, simply to exclude the seven crashes from consideration.<sup>40</sup>

## 2. *The Exclusion of Certain Assertedly Damaging Crashes*

The State contends that the Board erred in adopting PFS's probability analysis, because by so doing it implicitly determined that a cask *top* impact F-16 crash, at an angle different from the potentially damaging ones, could not at any speed breach another cask in the facility.<sup>41</sup> Put another way, the State claims the Board made an "incredible leap of faith," unsupported by the evidence, in therefore implicitly finding that a neighboring cask, only 5 feet away, could not suffer a high-speed damaging side impact from a crashing plane that just grazed the top of the initial cask (and was thereby eliminated as a damaging top impact crash).<sup>42</sup> Common sense, the State continues, teaches that the F-16 "will not be slowed in any substantial manner by a shallow impact to a cask top"; along those lines, it asserts, the only evidence in the record indicates that after such a crash, the F-16

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<sup>40</sup> In any event, even if these events were to be excluded, the Staff's sensitivity analysis — wherein *nine* low-speed crashes were eliminated — indicated that any increase in the probability of impact speeds greater than the bounding event would be somewhat less than 10%, not the larger amount the State urged. See Staff Exh. 119, "NRC Staff's Response to . . . Questions Concerning the Probability of an Accidental F-16 Crash into the PFS Facility," at 16; April 6 Tr. at 19,859; compare State's Motion at 8. This *nine*-crash sensitivity analysis would tend, of course, to overstate what could be expected if only the *seven* incidents at issue were eliminated, and thus tends to demonstrate that the result would be small enough not to materially affect the outcome previously reached.

<sup>41</sup> See State's Motion at 6.

<sup>42</sup> See *ibid.*

should be assumed to continue on to damage the sides of one or more of the other casks in its path.<sup>43</sup>

Based on the Board's adoption of the Applicant's analysis for side impact probability in determining "analyzed" events, the State asserts that any *top* impact with a greater horizontal component of speed than the bounding event must be considered an "unanalyzed" *side* impact to neighboring casks.<sup>44</sup> Accordingly, the State argues, because the Applicant calculated an incremental UEP for such impacts, this amount should be added to the total UEP which we adopted.<sup>45</sup>

The Applicant disagrees with the State's analysis and urges that it presents nothing new, being merely a repetition of claims made at the hearing and in the proposed findings.<sup>46</sup> In that regard, the Applicant calls attention to the evidence it adduced in an effort to rebut the State's theory: (1) an F-16 flying at speeds necessary to cause significant damage and impacting the top of one cask at an angle near horizontal cannot at that speed drop far enough to hit the second cask in a manner causing canister puncture; and (2) the tops of the casks are not simple flat disks but in fact have strong vertical protuberances that would be expected to catch the F-16s air scoop or damage its fragile underside in a manner that would decrease or redirect its momentum and prevent it from simply "skipping" into the neighboring cask.<sup>47</sup>

The Applicant also challenges the State's reliance on a "hypothetical" UEP calculation, reflected in Applicant Exh. 324, that shows a higher UEP than the Applicant originally calculated and the Board adopted. That exhibit, the Applicant says, must be read in light of its premise, which its expert Dr. Cornell explicitly characterized as an "unrealistic scenario" where an aircraft impacting at a particular angle undergoes no diminution in either horizontal velocity or mass and was assumed to continue on unaffected until it impacts the second cask in a fashion that would induce serious damage.<sup>48</sup> This *hypothetical* calculation, the Applicant continues, is not supported by the evidence in the record as to what *indeed* would happen if an F-16 hit the top of the cask at the angle of concern, and therefore it provides no basis for reconsideration. The Staff agrees with the Applicant.<sup>49</sup>

Although crashes into the tops of casks were thoroughly analyzed, the parties focused only upon such crashes as might breach the top — and therefore upon

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<sup>43</sup> See *ibid.*

<sup>44</sup> See *id.* at 6-7.

<sup>45</sup> See *id.* at 7.

<sup>46</sup> See Applicant's Response at 6.

<sup>47</sup> See Tr. at 19,555-65.

<sup>48</sup> See Applicant's Response at 7 (quoting Applicant Exh. 324, Dr. Allin Cornell, "Analysis of Hypothetical Unmitigated Shallow Angle Top Impact Case" [hereinafter Applicant Exh. 324]).

<sup>49</sup> See Staff's Response at 7.

crashes which had a high *vertical* component to their velocity. The State would, in essence, have us increase the damaging side-impact crash probability based on very high *horizontal* speed component crashes which glance off the top of one cask and then impact the side of a second cask.<sup>50</sup>

We do not find any significant evidentiary support for the State's proposition that the postulated secondary crashes can occur or indicating what damage they might cause. In any event, we have already seen that the State's argument that the UEP should be increased by the increment computed in Applicant Exh. 324 by Dr. Cornell reads too much into his conservative analysis of the hypothetical possibility of such crashes.<sup>51</sup>

Other evidence on the point indicates that the Staff's expert computed a much smaller UEP increment in his more refined analysis of the maximum effect one could expect from such secondary impacts. We find that if one were to incorporate any such events into the analysis, the Staff's conservative computation of the probability is a materially better estimate of the maximum effect one could reasonably expect from secondary crashes. Thus, even if we were to incorporate such events into the UEP, their maximum contribution cannot reasonably be expected to be larger than the net increase of approximately  $0.4 \times 10^{-7}$  found by the Staff's expert.<sup>52</sup>

The State properly challenges an aspect of the method by which the overall analysis in support of the application was performed: it was assumed that a crash into the storage area hits *either* the top *or* the side of a cask and that, because the F-16 is a fragile structure, the primary impact would so alter the plane's mass and velocity (and would remove so much of the plane's momentum) that no secondary impact could have any material effect. That assumption would be valid if an F-16 were as concentrated as a laser beam shining down the plane glide angle toward impact — that beam would hit only one or the other of a cask side or a cask top, not both. An F-16 of course does not have the characteristics of such a beam, however, and therefore the State is correct that there can be some F-16 crashes wherein the plane strikes a glancing blow to the top of a cask and thereafter hits the side (or top and side) of another cask.

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<sup>50</sup> See Dr. M.C. Thorne, Post Tr. at 18,857, ¶¶ 3-5.

<sup>51</sup> In fact, Dr. Cornell calculated that number “for the unrealistic scenario in which it is assumed that certain shallow angle aircraft hits on the top of the cask do not undergo any diminution of either their horizontal velocity or mass and then impact the side of a second cask at the most critical location for inducing damage.” See Applicant Exh. 324.

<sup>52</sup> See Staff Exh. 102, Dr. Dennis R. Damon, “NRC Staff's Evaluation of Private Fuel Storage, L.L.C. Aircraft Crash Probability Assessment” (May 11, 2004, as revised Sept. 9, 2004) at 20 [hereinafter Staff Exh. 102]. (The precise calculation came out to  $0.387 \times 10^{-7}$ ; we round off rather than seem to be assigning more accuracy than the uncertainties would allow.)

But not every impact on the top of a cask will have a secondary impact of great import. To put this in perspective, we note that the diameter of the fuselage of an F-16 is about one-third the diameter of a cask. For those crashes in which a major portion of the fuselage of the F-16 primarily impacts the top of a cask, then, one can reasonably expect the plane not only to suffer material deformation, but also to lose substantial momentum to that first cask, and thus, in such a case, the plane cannot reasonably be expected to have significant secondary impact.

That still leaves open the State's current suggestion that we have failed to incorporate the effects of secondary impacts when a crashing F-16 merely "clips" the back edge of a cask top without material damage, and then impacts the side of a second cask at essentially its original precrash velocity and in its original precrash configuration. The worst cask damage from such a *secondary* impact would, however, be no worse than the damage caused by an F-16 making a *primary* impact on the side of a "first" cask at that speed and angle, *a probability that has been fully considered except insofar as inclusion of such secondary crashes effectively enlarges, from a computational perspective, the cross-sectional area of the sides of the casks being impacted.* To this extent, the State's motion makes a valid point, but not a prevailing one.

The probability of side impact breaches was determined on the basis of cross-sectional area of the sides as related to the angle of the incoming aircraft, and the probabilities of impacts on the tops of casks were similarly based upon the cross section of the tops as related to the angle of the incoming aircraft. Thus, side impacts and top impacts were effectively separated in order to aid in examining the worst-case structural damage.

The State has focused its technical arguments upon impacts at 10 degrees or less from the horizontal (although it initially asserted that those at 30 degrees or less from the horizontal had been ignored).<sup>53</sup> The only technical (or even quasi-technical) analyses presented to us relate to crashes very close to the horizontal, and therefore we focus here upon impacts at 10 degrees or less.<sup>54</sup> A grazing impact must, to cause the effects the State posits, hit near the back of the top, not the front, and thus it would be inappropriate to utilize the entire area of the top for an impact of less than 10 degrees.<sup>55</sup> *Indeed, it is geometrically apparent that less*

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<sup>53</sup> State Motion at 6.

<sup>54</sup> It is also obvious that as impacts become steeper, the contact with the first cask top becomes more damaging, or, conversely, that a "grazing" crash can occur only in a smaller portion of the back edge of the top.

<sup>55</sup> We note that cross sections were computed for 10-degree increments, so this terminology means the cross section assigned to the 0- to 10-degree interval.

*than (and likely much less than) half of that area would avail the trajectory of concern to the State.*<sup>56</sup>

To understand the general issue, we note that the azimuth-weighted effective area for such impacts was estimated by the Applicant (and not controverted by the State) to be 0.0498 (compared to 0.0702 for side impacts).<sup>57</sup> Furthermore, the contribution to the UEP from side impacts was computed to be  $3.53 \times 10^{-7}$ , and 41% of that contribution came from impacts in the 0- to 10-degree increment<sup>58</sup> (i.e., the contribution to the UEP from all crashes into the side at less than 10 degrees was approximately  $1.4 \times 10^{-7}$  [41% of 3.53]). If one were to assume that *all* crashes into the *top* of a cask in the 0- to 10-degree increment would result in an unimpeded crash into the *side* of a second cask at the same angle, their contribution to the UEP would be calculated using a simple linear ratio of the two areas, or around  $1.0 \times 10^{-7}$ .<sup>59</sup>

But as reasoned in the italicized sentence above, a large portion of such top impacts would hit in an area that would preclude an F-16 from proceeding unaffected into another cask's side. Thus, the general analytical approach outlined in the preceding paragraph would yield a very conservative (over)estimate of the additional UEP that might be assigned to such events — even if one were to incorporate crashes at steeper angles (since, as stated above, an even smaller fraction of those would proceed undamaged). Thus, one would expect a more detailed, less conservative analysis to lead to a substantially smaller number than  $1.0 \times 10^{-7}$ . That said, even this number is considerably lower than Dr. Cornell's very conservative (as he put it, "unrealistic") estimate of  $1.94 \times 10^{-7}$ , which the State asserts is the only evidence before us.<sup>60</sup> In fact, as previously observed (note 52, above), the Staff's expert Dr. Damon conservatively estimated that the UEP would increase by only approximately  $0.4 \times 10^{-7}$  when assuming there was no loss of momentum from the grazing impact.<sup>61</sup>

We find the Staff's conservative estimate to be fully consistent with the foregoing generalized analysis and therefore that, even if such events were to be shown to be possible, the incremental effect on the UEP can reasonably be

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<sup>56</sup>In addition, a significantly smaller portion of the cross section would be used for the 10- to 20-degree increment and an even smaller portion for the 20- to 30-degree increment, and so on.

<sup>57</sup>See Applicant Exh. 265, Dr. 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) at 48 (Tables V-3 and V-4) [hereinafter Applicant Exh. 265].

<sup>58</sup>See Applicant Exh. 265 at 49.

<sup>59</sup>That result is derived from the ratio of the effective top area of 0.0498 to the effective side area of 0.0702, multiplied by the  $1.4 \times 10^{-7}$  UEP from less than 10-degree side impacts.

<sup>60</sup>Applicant Exh. 324.

<sup>61</sup>Staff Exh. 102 at 20-21.

expected not to exceed  $0.4 \times 10^{-7}$ , increasing the overall UEP to a maximum of no more than  $7.8 \times 10^{-7}$ . This remains below the threshold of  $1.0 \times 10^{-6}$  for design basis events, even without consideration of the numerous conservatisms built into the analyses and discussed in depth in our February 24 Decision. Therefore, whether or not the State is correct in faulting our original analyses for not incorporating these hypothetical events, we find that the posited effects of a secondary side impact arising from a grazing top impact could not materially affect the outcome reached in our prior ruling on this matter.

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In sum, for the reasons stated above, we disagree with the State that the probability of a consequential crash, which we found on February 24 to be below one-in-a-million per year, should — by eliminating the seven questionable crashes and focusing on the potential “skipping” secondary impact crashes — be increased to above that cutoff number. In light of that conclusion, we need not address the possibly difficult question — which we posed 2 years ago (*see* LBP-03-4, 57 NRC at 135 n.105) — of whether there should be any essential licensing difference between a calculation that falls just short of the  $1 \times 10^{-6}$  mark and one that lies just beyond it. Nor need we determine whether the qualitative conservatisms that made us even more comfortable with a number that *meets* the standard (Feb. 24 Decision at B-37–41) might also be employed to convert a number that *fails* to meet the standard into one that *does*.

### III. CONCLUSION

As has been seen, we have reconsidered, at the State of Utah’s request, elements of our February 24, 2005 Final Partial Initial Decision regarding “F-16 Aircraft Accident Consequences.” Having done so, *we are essentially adhering to the result previously reached, but are modifying the supporting rationale to the extent set out above.*

Accordingly, the ultimate relief sought by the State’s Motion for Reconsideration — a determination as to Contention Utah K that, contrary to our earlier ruling, the Applicant PFS has *not* carried its burden of proof concerning the risk to the proposed facility from F-16 accidental crashes — is DENIED. Having given the matter due evaluation, we affirm our earlier determination that the likelihood of a consequential accidental F-16 crash is less than the one-in-a-million per year standard set by the Commission in this case.

As requested by the State (Motion at 8-9) and acceded to by the other parties (Applicant’s Response at 8-9; Staff’s Response at 8-9), we are, however, making explicit a premise of our Decision that was previously only implicit. Specifically, *our findings and conclusions in favor of the Applicant are applicable only to the*



*modified cask design,*<sup>62</sup> and only under the conditions, which the Applicant put forward partway through the proceeding to respond to certain Staff concerns and to resolve related matters raised by the State's ensuing contention. Any other design and conditions are not covered by our Decision.

Given the result we reach today, nothing said herein alters the *status quo*, under which the Commission has been, and continues to be, vested by NRC regulations with the authority to issue the requested license. See February 24 Final Partial Initial Decision, at C-2, citing 10 C.F.R. § 2.764(c). As outlined above, we nonetheless suggest to the Commission that, independent of the action it takes as to the issuance (or not) of the license, it consider: (1) directing the NRC Staff to perform the "diminished shielding" radiation dose analysis described on pages 330-31 herein, and (2) based on the Staff's report thereof, taking whatever additional steps it may then deem appropriate, in this proceeding or in a collateral one.

The Commission has previously held in abeyance the time within which a petition for review of our February 24 Final Partial Initial Decision may be filed, pending our ruling on the State's Motion for Reconsideration. See March 11, 2005 Commission Order at 1. With today's ruling, the matter is no longer in abeyance and — subject to the Commission issuing a different directive — the review periods enunciated in our February 24 Decision are once again in force, *as follows*:

Pursuant to 10 C.F.R. § 2.760(a), our February 24, 2005 Final Partial Initial Decision, as amended by this Memorandum and Order (Ruling on Reconsideration Motion), 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 Ruling on Reconsideration (which shall be considered to have been served by regular mail for the purpose of calculating that date), any party may file with the Commission a PETITION FOR REVIEW, on the grounds specified in 10 C.F.R. § 2.786(b)(4), of the February 24 Final Partial Initial Decision, as hereby amended. Any such petition for review should also cover those interlocutory rulings of ours that were not previously appealable either by NRC Rule or by Commission Order, if indeed there remain any such rulings. 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).

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<sup>62</sup>The design changes involve Safeguards-related matters and are thus not recited here.

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  
May 24, 2005

[Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for the Applicant PFS, the Intervenor State of Utah, and the NRC Staff.]

**Separate Statement of Judge Lam:**

I join in my colleagues' Part I discussion of why the concern about the consequences of diminished shielding was not preserved in this adjudication, as well as in their suggestion to the Commission as to how it might address the matter if it chooses to do so. Because Part II does not significantly alter the rationale by which the Board majority reached its February 24 decision, I adhere to the dissenting opinion I issued at that time.

Peter S. Lam  
ADMINISTRATIVE JUDGE

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\*Because Judge Lam joins in Part I but does not join in Part II of this Memorandum and Order, he has not affixed his signature hereto, but instead makes the statement appearing on this page.

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)**

**June 20, 2005**

**RULES OF PRACTICE: REOPENING OF RECORD**

A party seeking to reopen a closed record to introduce a new issue (as opposed to additional evidence on a matter already considered) must back its claim with enough evidence to withstand summary disposition when measured against its opponent's contravening evidence. *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-138, 6 AEC 520, 523-24 (1973). This is in addition to the usual requirements for a well-pleaded contention and for admission of a late-filed contention found in 10 C.F.R. § 2.714 (former rules).

**RULES OF PRACTICE: REOPENING OF RECORD**

New information is not enough, *ipso facto*, to reopen a closed hearing record at the last minute; the information must be significant and plausible enough to require reasonable minds to inquire further. See *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. 519, 554-55 (1978). Obviously, "there would be little hope" of completing administrative proceedings if each newly arising allegation required an agency to reopen its hearings. *Id.*

at 555. As our hearing rules specify, reopening requires a showing that the new information will “likely” trigger a “different result.” See 10 C.F.R. § 2.734(a)(3) (former rule); see also *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage installation), CLI-04-9, 59 NRC 120, 123-26 (2004). Therefore the Board correctly considered both Petitioner’s new allegations and the Applicant’s contrary evidence in determining whether there was a real issue at stake warranting a reopened hearing.

## MEMORANDUM AND ORDER

The State of Utah has petitioned for review of the Licensing Board’s February 24 order rejecting its proposed new contention, Utah UU (Ramifications of DOE’s Refusal To Accept Fuel in Welded Canisters from the PFS Site).<sup>1</sup> For the reasons given below, we find the Board decision reasonable and deny the petition for review. Utah’s thinly supported new contention does not justify reopening the adjudicatory record and restarting our hearing process this late in a protracted, 8-year-old proceeding.

### I. BACKGROUND

PFS proposes to use a dry storage system manufactured by Holtec Corporation at the facility for which it is seeking a license. The system calls for the spent fuel to be taken from fuel pools and sealed in a “multi-purpose canister” (MPC) at the site of the originating reactor.<sup>2</sup> The advantage of the Holtec system is that, in the short term at least, the fuel is not removed from the MPC after sealing. The MPC is loaded with fuel assemblies inside the spent fuel pool, then transferred into either a transportation cask or a storage cask, depending whether it will be stored onsite or elsewhere. The MPC contains the fuel and any byproducts, while the cask (or “overpack”) provides shielding.

One goal of the PFS project was for the ISFSI to be the last stop for the spent fuel before it is sent to a permanent geological repository. The project’s Final Environmental Impact Statement (FEIS) anticipated that the MPC would be used

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<sup>1</sup> LBP-05-5, 61 NRC 108 (2005).

<sup>2</sup> The process is described in detail in Private Fuel Storage’s Safety Analysis Report, Ch. 5, and is also described in CLI-04-22, 60 NRC 125, 132-33 (2004).

both to store the spent fuel and for transportation to the permanent repository.<sup>3</sup> The FEIS assumed for its transportation impacts analysis that the fuel would be shipped to Yucca Mountain after leaving PFS.<sup>4</sup>

Neither the FEIS nor PFS's Environmental Report discussed costs, procedures, or environmental consequences of repackaging the fuel assemblies somewhere down the line after leaving the PFS facility. PFS has no plans, nor will it have the capability, to remove fuel from the MPC at its storage facility.

Recently, Gary Lanthrum, the Director of the Department of Energy's Office of National Transportation, made remarks suggesting that PFS's vision for this project was unworkable, because under its Standard Contract DOE could not accept fuel in an MPC for permanent storage. He allegedly indicated (in the words of the Board) that "PFS-stored fuel would later be ineligible for disposal at the proposed Yucca Mountain permanent repository, unless it were first to be unsealed and repackaged elsewhere."<sup>5</sup> Utah says that the upshot of this is that the spent fuel stored at the PFS facility would have to be shipped back to either the originating reactor or some other facility for repackaging into containers acceptable to DOE prior to final disposal.

Utah's proposed Contention UU claimed that Lanthrum's remarks mean that the NRC is obliged to redo its FEIS. Utah argues, first, that the EIS should consider the costs and environmental effects of shipping spent nuclear fuel back and forth across the country three times and removing it from a welded canister. Second, Utah maintains, the FEIS should consider the consequences of creating a "dysfunctional" system of nuclear waste disposal, and whether, by approving the project, the NRC would usurp DOE's role in setting waste acceptance criteria for transportation and permanent disposal. Finally, Utah said that PFS should show financial assurances that either it or its customers can pay to repackage the fuel in a form acceptable to DOE. Utah argues that the FEIS's cost/benefit analysis would be affected considerably by the costs of shipping and repackaging the fuel.<sup>6</sup>

## II. THE BOARD'S RULING

The Board found that PFS's rebuttal evidence — DOE documents indicating a willingness to accept PFS-type stored fuel — rendered Lanthrum's remarks

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<sup>3</sup> See NUREG-1714, "Final Environmental Impact Statement for the Construction and Operation of an Independent Spent Fuels Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County, Utah" (Dec. 2001), at 5-54 to 5-55.

<sup>4</sup> *Id.* at 5-35, 5-54.

<sup>5</sup> LBP-05-5, 61 NRC at 110.

<sup>6</sup> Utah's proposed contention does not dispute that DOE is ultimately responsible for disposing of the spent fuel, regardless of where it is stored in the next 20 to 40 years.

insufficient to reopen the licensing hearing to consider whether spent fuel shipped to PFS will eventually have to be sent home for repackaging.

The Board cited longstanding agency practice holding that a party seeking to reopen a closed record to introduce a new issue (as opposed to additional evidence on a matter already considered) must back its claim with enough evidence to withstand summary disposition when measured against its opponent's contravening evidence.<sup>7</sup> This is in addition to the usual requirements for a well-pleaded contention and for admission of a late-filed contention.<sup>8</sup> The Board therefore considered numerous documents PFS submitted showing that DOE has taken the position, consistently and often, that it will accept fuel in a variety of NRC-approved storage containers at the permanent geological repository.

The Board noted that there were two possible views of the significance of Lanthrum's comments. The first is Utah's interpretation that Lanthrum was stating "a new DOE policy" of not accepting any prepackaged, PFS-type spent fuel, "ever."<sup>9</sup> The other is PFS's, that Lanthrum's statement merely described the current status of DOE's Standard Contract for Disposal of Spent Nuclear Fuel and/or High Level Radioactive Waste,<sup>10</sup> which, as of now, "does not cover PFS-stored fuel," but is expected to be amended to accommodate PFS-type stored fuel.<sup>11</sup>

The Standard Contract says that when DOE is ready to pick up fuel, it will send containers to the reactor site into which the operators will transfer the spent fuel.<sup>12</sup> The contract is silent as to what happens when the reactor operator has already removed the fuel from the spent fuel pool and into dry storage. PFS argued that despite what the Standard Contract currently provides, DOE has officially stated a position that it will modify the contract to cooperate with utilities and accept and transport a variety of packages. After considering PFS's evidence indicating that DOE has attempted to maintain flexibility with respect to possible storage cask designs, the Board concluded that the oral opinion of Lanthrum — whose "management authority . . . does not appear to be in the specific area of which he spoke" — was an insufficient basis for concluding that DOE is now turning away from its longstanding policy.<sup>13</sup> Hence, the Board concluded that Utah's claims did not have the factual support necessary to reopen the closed hearing record and introduce a new claim.

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<sup>7</sup> LBP-05-5, 61 NRC at 116, citing *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-138, 6 AEC 520, 523-24 (1973).

<sup>8</sup> See 10 C.F.R. § 2.714 (former rules).

<sup>9</sup> See LBP-05-5, 61 NRC at 118.

<sup>10</sup> See 10 C.F.R. Part 961.

<sup>11</sup> See LBP-05-5, 61 NRC at 117.

<sup>12</sup> See 10 C.F.R. § 961.11.

<sup>13</sup> See LBP-05-5, 61 NRC at 125.

### **III. UTAH'S PETITION DOES NOT SHOW AN ERROR OF LAW OR FACT WARRANTING COMMISSION REVIEW**

#### **A. Utah Was Not Denied Procedural Fairness When Petition Deadline Was Not Extended**

As a preliminary matter, Utah claims that the Commission's refusal to extend the time for its petition for review of LBP-05-7 was unfair. The facts do not support Utah's claim of unfairness.

The Board issued its ruling rejecting Contention UU the same day it issued its merits ruling on aircraft crash hazards.<sup>14</sup> On March 7, 2005, Utah filed a motion for reconsideration with the Board on the aircraft crash hazard ruling. The reconsideration motion did not attack the Contention UU ruling in any way. Also on March 7, Utah asked the Commission for an extension of time to file a petition for review of the aircraft crash hazard ruling until 15 days after the Board had ruled on the motion for reconsideration. Utah added that its request "would also extend the time for filing a petition for review of Contention Utah UU." The petitions for review were due on March 16.

The Secretary of the Commission has the authority to rule on procedural matters such as motions for enlargement of time or to expand the page numbers of briefs.<sup>15</sup> On March 11, the Secretary issued an order granting an enlargement of time with respect to review of the Board's aircraft crash hazards ruling, but declining to extend the time with respect to review of the Contention UU ruling. Utah thus had 5 days, including the weekend, to complete its petition for review after learning that it would not receive any additional time to file it.

This does not strike us as unfair. Utah's extension request focused on the air crash issue only and gave no reason whatever why it needed additional time to file a petition for review of the Board's ruling on Contention UU. Indeed, Utah did not even specifically ask for an extension on the Contention UU ruling, but merely assumed that extending the time for a petition for review on the aircraft crash hazards ruling would extend the petition deadline for Contention UU. There was no reason Utah could not have begun work on the petition for review between the time it filed its reconsideration motion on March 7 and the time it received word on its extension request.

In any event, Utah used the time it had available to file a well-written petition for review using the entire page allowance (15 pages). Utah does not say how it might have improved its petition or made additional arguments if it had more

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<sup>14</sup> See Memorandum (Providing a Publicly Available Version of Today's Board Decision on F-16 Aircraft Accident Consequences).

<sup>15</sup> 10 C.F.R. § 2.772(b) (former rules).

time. In short, Utah has shown no unfair prejudice for the partial denial of its extension request.

**B. The Board Reasonably Found an Insufficient Factual Basis To Reopen the Record To Consider a New Contention**

Commission review is warranted when the petitioner demonstrates that the Board made a clear error in a finding of fact, an error of law, a prejudicial procedural error, or where the Board decision raises a “substantial and important question of law, policy or discretion.”<sup>16</sup> Utah argues that the Board erred in both law and fact in rejecting its contention.

The Board applied the correct standard that a party seeking to reopen a closed record to raise a new matter faces an elevated burden to lay a proper foundation for its claim. Commission practice holds that the standard for admitting a new contention after the record is closed is higher than for an ordinary late-filed contention. The Board quoted the Appeal Board’s strict *Vermont Yankee* standard for reopening the record to admit a new contention:

[T]o 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, . . . no reopening of the evidentiary hearing will be required if the [documents] submitted in response to the motion demonstrate that there is no genuine unresolved issue of fact.<sup>17</sup>

New information is not enough, *ipso facto*, to reopen a closed hearing record at the last minute; the information must be significant and plausible enough to require reasonable minds to inquire further.<sup>18</sup> As our hearing rules specify, reopening requires a showing that the new information will “likely” trigger a “different result.”<sup>19</sup> Therefore the Board here correctly considered both Utah’s new allegations and PFS’s contrary evidence in determining whether there was a real issue at stake warranting a reopened hearing.

Utah submitted an affidavit from Dianne Neilson, Ph.D., the Executive Director of Utah’s Department of Environmental Quality, concerning a conversation she had with Gary Lanthrum, the Director of DOE’s Office of National Transportation.

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<sup>16</sup> 10 C.F.R. § 2.786(b)(4) (former rules).

<sup>17</sup> LBP-05-5, 61 NRC at 116, quoting *Vermont Yankee*, ALAB-138, 6 AEC at 523-24.

<sup>18</sup> See *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. 519, 554-55 (1978). Obviously, “there would be little hope” of completing administrative proceedings if each newly arising allegation required an agency to reopen its hearings. *Id.* at 555.

<sup>19</sup> See 10 C.F.R. § 2.734(a)(3) (former rule); see also *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage installation), CLI-04-9, 59 NRC 120, 123-26 (2004).



Neilson reported that Lanthrum said that “under the DOE standard contract with the nuclear industry, DOE was only required to accept bare fuel. As such, said Mr. Lanthrum, DOE would not accept spent nuclear fuel in welded canisters and DOE has no obligation to pick up fuel from the Private Fuel Storage (PFS) facility.”<sup>20</sup> Because, obviously, DOE cannot intend to ship “bare fuel” across the country, Utah’s second supporting document expands on what Lanthrum might have meant by his statement. An article in the *Salt Lake Tribune* quotes Lanthrum as saying “Nuclear Regulatory Commission (NRC) rules” require that “any radioactive waste heading for Yucca Mountain must be freshly packed by nuclear power plants before the DOE takes ownership of it.”<sup>21</sup> “The *current contracts* for how we receive fuel makes [PFS’s] plan unacceptable,” the article quotes him as saying.

DOE’s Standard Contract apparently anticipates that the fuel is still in spent fuel pools at the originating reactor until DOE sends for it. The contract provides that DOE will send containers, suitable for use at the particular nuclear power plant,<sup>22</sup> and the operators are responsible for packing the containers.<sup>23</sup> It also says that the power plants are to notify DOE 60 days prior to packing the containers in case DOE wants to observe.<sup>24</sup>

The PFS plan would differ from this scheme in that DOE would be relieved of the responsibility to provide the shipping containers — the spent fuel stored at PFS would already be in containers — and DOE would not have the opportunity to observe the fuel packed prior to shipment. Of course, the system originally envisioned by the Standard Contract was defeated by circumstance long before Private Fuel Storage entered the picture.<sup>25</sup> Because developing a permanent

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<sup>20</sup> State of Utah’s Request for Admission of Late-Filed Contention Utah UU (Ramifications of DOE’s Refusal To Accept Fuel in Welded Canisters from the PFS Site), November 12, 2004, Exhibit 1.

<sup>21</sup> *Id.* Exhibit 2.

<sup>22</sup> *See* 10 C.F.R. § 961.11, art. IV.B.2.

<sup>23</sup> *Id.* art. IV.A.2(a): “The Purchaser shall arrange for, and provide, all preparation, packaging, required inspections, and loading activities necessary for the transportation of [spent nuclear fuel] and [high level waste] to the DOE facility.”

<sup>24</sup> The contract does contemplate that the fuel may have already been moved away from the originating reactor, however: “The term *delivery* means the transfer of custody . . . of spent nuclear fuel . . . from Purchaser to DOE at the Purchaser’s civilian nuclear power reactor *or such other domestic site as may be designated by the Purchaser and approved by DOE.*” *Id.* art. I.7.

<sup>25</sup> The Nuclear Waste Policy Act directed DOE to start disposing of spent fuel no later than January 31, 1998, *see* 42 U.S.C. § 10222(a)(5)(b), leading to a great deal of litigation between DOE and the affected nuclear power reactors. *See, e.g., Alabama Power Co. v. Department of Energy*, 307 F.3d 1300 (11th Cir. 2002); *Wisconsin Electric Power Co. v. Department of Energy*, 211 F.3d 646 (D.C. Cir. 2000); *Northern States Power Co. v. Department of Energy*, 128 F.3d 754 (D.C. Cir. 1997); *Indiana Michigan Power Co. v. Department of Energy*, 88 F.3d 1272 (D.C. Cir. 1996).

repository has taken much longer than originally contemplated, many power reactors have already removed fuel from pools to dry storage casks well before DOE is in a position to take delivery.

In opposition to Utah's contention, PFS submitted documents showing that DOE has agreed to cooperate with power reactors that could not wait for DOE before moving older fuel out of its storage pools. For example, a 2001 letter from DOE to the Sacramento Municipal Utility District concerning the Rancho Seco Independent Spent Fuel Storage Installation agreed that "the Department has previously stated its willingness to initiate the appropriate actions to include such dual-purpose storage/transport systems as acceptable waste forms under the terms of the disposal contracts."<sup>26</sup> That letter said that the DOE was "in the process of" identifying necessary modifications to the contracts, including developing specifications for standard dual-purpose spent fuel canisters.<sup>27</sup> The letter went on to say that the Department "continue[d] to believe in the overall benefits that may accrue to a multi-purpose storage/transport/disposal system," although it was unable to complete final design and acceptance criteria for canistered fuel.<sup>28</sup>

PFS also included a 1996 letter from DOE, Office of Civilian Radioactive Waste Management, to Yankee Atomic Electric Company that similarly indicated a willingness to modify its Standard Contract to accommodate fuel in dry storage or transport casks:

At the time [the Standard Contract] was developed . . . the issue of accepting large multiple spent fuel element containers was not contemplated by the Department or utilities. Therefore, these containers are currently not identified as an acceptable waste form under the contract. *However, consistent with the goals concerning minimizing spent fuel handling, once the Nuclear Regulatory Commission (NRC) has certified the NAC transport-storage system, the Department would be willing to initiate the appropriate actions to include such a system as an acceptable waste form.*<sup>29</sup>

Still another DOE letter, this one to the Governor of Maine, concerning the approval of the NAC Universal Storage System for spent nuclear fuel, reiterates DOE's flexibility on accepting spent fuel:

Your letter also requests that the Commission, as a pre-requisite to approval of the proposed rule, acquire binding assurances from the Department of Energy that the Department will accept spent fuel for transport and disposal that has been stored in

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<sup>26</sup> See Applicant's Response to State of Utah's Request for Admission of Late-Filed Contention Utah UU (Dec. 6, 2004), Exhibit 8 (DOE Letter to Steve Redecker, SMUD, Apr. 6, 2001).

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> Applicant's Response, Exhibit 7 (August 20, 1996) (emphasis added).

accordance with NRC approved procedures. It is my belief that there is no need for the Commission to obtain such assurances from the Department, as they already exist under the terms of the contract for disposal that the Department has with Maine Yankee Atomic Power Company. The contract covers the acceptance, transport, and disposal of all spent nuclear fuel from the Maine Yankee reactor, regardless of the condition of the spent nuclear fuel.<sup>30</sup>

Consistent with this longstanding DOE position that the Standard Contract would be amended to provide for DOE to pick up prepackaged fuel, the proposed Yucca Mountain facility is being designed to receive fuel in dual-purpose canisters such as those to be used at PFS. PFS provided the Board with excerpts of DOE's 2002 Final Environmental Impact Statement for Yucca Mountain, where it described procedures for dealing with commercial spent fuel in a variety of canisters.<sup>31</sup> According to the FEIS, commercial spent fuel in dual-purpose canisters would go to an assembly transfer line that would cut off the canister lid, transfer the assemblies into a holding pool, where they could be sorted and "blended."<sup>32</sup> PFS also brought to the Board's attention excerpts from the DOE Civilian Radioactive Waste Management System Requirements Document, a 2004 issuance from the DOE Office of Civilian Waste Management, showing that facilities for dealing with spent fuel in a variety of dual-use canisters was a requirement for the geologic repository.<sup>33</sup>

In the face of this rather overwhelming written record, Utah offers only the unexplained (and apparently off-the-cuff) remarks of Lanthrum, and argues that his remarks require a rethinking of fundamental assumptions about the PFS project. The Board sensibly thought differently. The Board pointed to three reasons why Lanthrum's statements did not require reopening the record and conducting further hearings. First, the Board noted, it was unclear from his remarks whether Lanthrum was merely pointing out that there are no provisions in the Standard Contract for dealing with prepackaged fuel, or whether he literally

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<sup>30</sup> Applicant's Response, Exhibit 3 (May 3, 2000).

<sup>31</sup> See Applicant's Response to State of Utah's Request for Admission of Late-Filed Contention Utah UU (Dec. 6, 2004), Exhibit 2, USDOE Office of Civilian Radioactive Waste Management, Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada — Readers Guide and Summary, at 2-7, 2-21 (Feb. 2002).

<sup>32</sup> FEIS at 2-21, 2-23. Fuel blending is the process of mixing hotter fuel with cooler fuel in a disposal package to manage the total heat.

<sup>33</sup> See Applicant's Response, Exhibit 1 (U.S. Department of Energy, Office of Civilian Radioactive Waste Management, "Civilian Radioactive Waste Management, System Requirements Document," DOE/RW-0406, Rev. 6 (Sept. 2004)). With Yucca Mountain already being designed to accommodate canistered fuel, Utah's argument that PFS's license would preempt DOE's authority to set standards for the Geologic Repository is baseless.

meant that DOE intended to change its previously expressed stance with respect to that fuel. Second, the Board pointed out that Lanthrum is outside the direct chain of command from the office in charge of setting waste acceptance policy at the DOE. Third, the Board stressed that Lanthrum's remarks were contradicted by official documents, "whose legitimacy the state has not challenged."<sup>34</sup> We see no reason to second-guess the Board's reasonable conclusion that an officially described DOE position cannot be gainsaid by informal remarks by a DOE official speaking outside his own area of direct responsibility.

In addition to not providing any official documentation that DOE has changed its policy, Utah offered no theory why DOE would have a sudden change in policy. As Utah pointed out in its proposed contention, a reversal in DOE policy at this stage would impose additional costs, both on the reactor owners and DOE itself. It is extremely unlikely that DOE would arbitrarily impose risks on the public and expenses on the waste generating utilities without a good reason for doing so. If some logistical obstacle to taking fuel in welded canisters had recently arisen, that might be a reason DOE would change its policy. But the remarks on which Utah's contention rested only referred to the terms of Standard Contract, not any newly arisen logistical or technical impediment to accepting spent fuel in a welded canister. If there were some new development, seemingly there would be some evidence of it somewhere besides remarks from the director of the DOE's National Transportation Office. Utah has offered no such evidence.

It appears to us that the information PFS presented the Board shows that DOE has consistently both acknowledged that the Standard Contract needs modification to designate prepackaged fuel as an acceptable waste form and indicated a willingness to make any necessary modifications in the contract (consistent with the final design of the geological repository).

Utah also argues that the Board erroneously concluded that the terms of the Standard Contract were not currently binding and that this is a mistake of law on the Board's part, warranting Commission review. The State says that the Standard Contract as it currently exists, not as it could be amended, controls.<sup>35</sup> But if Utah considers the terms of the Standard Contract decisive, then its new contention is untimely by a wide margin. The provisions of the Standard Contract have not changed in 20 years.

The Board did not attempt to interpret the terms of the Standard Contract as to the obligations of the respective parties. This is appropriate. It is up to DOE, and possibly the courts, to interpret the law governing DOE's obligations under NWPA and the Standard Contract. The Board did not need to rule on whether DOE must take PFS fuel, as PFS claims, or is prohibited from taking PFS fuel,

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<sup>34</sup> LBP-05-5, 61 NRC at 117-18, 124-25.

<sup>35</sup> See Utah's Petition for Review at 7-8.

as Utah claims. This is because Utah did not provide sufficient evidence that DOE had reversed its previous position that it would accept prepackaged fuel and amend the Standard Contract if necessary to do so. We do not think the Board's ruling constitutes a mistake of fact or law on the relevant evidence.

In sum, we agree with the Board's decision not to reopen this case to hold a hearing on Utah's new contention. The new contention is much too thinly supported to conclude that taking it to hearing would "likely" cause a different result within the meaning of our reopening rule.<sup>36</sup>

#### IV. CONCLUSION

For the forgoing reason, we deny Utah's petition for review.<sup>37</sup>  
IT IS SO ORDERED.

For the Commission<sup>38</sup>

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 20th day of June 2005.

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<sup>36</sup> See 10 C.F.R. § 2.734(a)(3) (former rules).

<sup>37</sup> Utah's petition for review (at 14-15) also asks the Commission to initiate a rulemaking to consider how to create "a comprehensive, integrated and coherent national waste system." In its original request for admission of proposed Contention UU, however, Utah's request for a new regulation apparently embraced only a requirement that funds be escrowed to cover shipments returning the spent fuel casks to the originating reactors. See State of Utah's Request for Admission of Late-Filed Contention Utah UU (Ramifications of DOE's Refusal To Accept Fuel in Welded Canisters from the PFS Site) or in the Alternative Petition for Rulemaking, at 10. But in both its original pleading proposing Contention UU, and in its petition for review, Utah's request was too vague to satisfy our established process for seeking a rulemaking. See 10 C.F.R. § 2.802. Utah is fully familiar with our rulemaking process. See *Bullcreek v. NRC*, 359 F.3d 536 (D.C. Cir. 2004).

<sup>38</sup> Out of an abundance of caution, Commissioner Jaczko elected to abstain from voting on this order in light of his decision not to make public statements regarding Yucca Mountain for 1 year from January 21, 2005. Commissioners McGaffigan and Lyons were not present for affirmation of this Memorandum and Order. Had they been present, they would have affirmed their prior votes.

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. 40-8838-MLA-2**

**U.S. ARMY**  
**(Jefferson Proving Ground Site)**

**June 20, 2005**

The Commission orders the U.S. Army to provide a report detailing its past and planned efforts to gather the information necessary for the Staff to complete its technical and environmental reviews. Additionally, the Commission orders the Staff to provide a report regarding the steps it plans to take to complete its reviews in light of the information provided by the Licensee, and also whether the Applicant's recently submitted information will allow the Staff to proceed with its evaluations related to the Army's new license amendment application. Finally, the Commission orders the Army and the Staff to describe the practical impacts on their respective activities were the Staff to approve (or disapprove) the pending application.

**MEMORANDUM AND ORDER**

In a March 31, 2005 Memorandum,<sup>1</sup> the Presiding Officer brought to the Commission's attention the circumstances that have seemingly brought the above-captioned proceeding to a halt, and suggested that the Commission might like to

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<sup>1</sup>LBP-05-9, 61 NRC 218 (2005).

take steps within its powers to bring about some resolution. For the following reasons, we order the Staff and Licensee to report directly to the Commission on what steps are being taken to resolve this matter.

Between 1984 and 1994, the U.S. Army tested depleted uranium (DU) tank penetration rounds at Jefferson Proving Ground using an NRC materials license. The army concluded testing more than 10 years ago, but a substantial quantity of DU has been left on the site. After deciding that decommissioning the site would be hazardous due to the presence of unexploded ordnance, the army sought a possession-only license.

Petitioner Save the Valley, Inc., raised environmental and safety concerns over the effects of leaving DU munitions onsite that the Presiding Officer found to be germane.<sup>2</sup> After granting Petitioner's request for a hearing, the Presiding Officer held the proceedings in abeyance until the Staff could complete its technical review and issue an environmental assessment and Safety Evaluation Report on the possession-only license.

The NRC Staff reported back to the Presiding Officer that it could not complete its technical and environmental reviews until it received additional information from the Army. In March, the Staff informed the Presiding Officer that it was still not certain when the Licensee will furnish the necessary information.

The Presiding Officer brought this matter to our attention because the Petitioner has waited over 5 years for a hearing on its environmental and safety concerns. This situation hinders public participation, leaves public safety issues unresolved, and thwarts this agency's goal of expeditious adjudication.

We, therefore, order the Licensee 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. Additionally, by July 20, the Staff is ordered to provide a report to the Commission regarding the steps it plans to take to complete its reviews in light of the information provided by the Licensee. We understand that on May 25, 2005, the Applicant submitted to the Staff in a publicly available submittal several hundred pages of new information related to this license.<sup>3</sup> The Staff regards the new information as a new license amendment request superseding the earlier application for a possession-only license. The Staff should include a discussion of whether the Applicant's recently submitted information will allow it to proceed with its evaluations related to this new license amendment application. Also in their filings, the Licensee and the Staff should describe the practical impacts on their respective activities in the event the Staff approves or disapproves of the

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<sup>2</sup> LBP-04-1, 59 NRC 27 (2004).

<sup>3</sup> See ADAMS document Accession Number ML051520319.

pending application. Petitioner is also invited to provide its views on all of these matters by July 30, 2005.

IT IS SO ORDERED.

For the Commission<sup>4</sup>

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 20th day of June 2005.

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<sup>4</sup>Commissioners McGaffigan and Lyons were not present for affirmation of this Memorandum and Order. Had they been present, they would have affirmed their prior votes.



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. 50-413-OLA  
50-414-OLA**

**DUKE ENERGY CORPORATION  
(Catawba Nuclear Station, Units 1  
and 2)**

**June 20, 2005**

The Commission disapproves the four license conditions imposed by the Board.

**RULES OF PRACTICE: SUA SPONTE REVIEW; MOOTNESS**

Under both NRC rules and longstanding agency precedent, the Commission has the authority to review interlocutory and final licensing board decisions on its own motion. The Commission's practice is to address novel legal or policy issues and to provide appropriate guidance. The Commission will do so even in moot cases if necessary to clarify important issues for the future. The Commission is not subject to the constitutional "case or controversy" requirement that prevents federal courts from deciding moot questions.

**EXEMPTIONS**

The regulatory standard for authorizing exemptions provides that an exemption may be granted if it is authorized by law and will not endanger life or property or the common defense and security, and is otherwise in the public interest.

## **RULES OF PRACTICE: REFERRAL OF RULING TO COMMISSION**

In future cases, any legal questions about the interpretation of the design-basis-threat regulatory requirements that arise in the course of considering the admission of contentions or later in the adjudication should be referred to the Commission for appropriate guidance in lieu of needless speculation and misinterpretation.

## **RULES OF PRACTICE: CERTIFICATION OF ISSUES TO COMMISSION**

The Commission encourages boards and presiding officers to certify novel legal or policy questions early in a proceeding. *See Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 23 (1998).

# **MEMORANDUM AND ORDER**

## **I. BACKGROUND**

This proceeding arises from Duke Energy Corporation's application for a license amendment to authorize the use of four lead test assemblies of mixed oxide (MOX) fuel in one of its Catawba nuclear reactors. On March 10, 2005, the Licensing Board issued its final partial initial decision (hereinafter "PID-Security")<sup>1</sup> on a security contention brought by the Blue Ridge Environmental Defense League ("BREDL"). BREDL's contention challenged certain exemptions Duke Energy Corporation sought for its Catawba facility during testing of MOX assemblies. Because the Board's decision contains protected safeguards information, the order has not been made public in its entirety. The Board did, however, issue a public notice of the decision, indicating that, *subject to certain conditions*, Duke had met its burden to show that its requested exemptions from the requirements of 10 C.F.R. Parts 11 and 73 are appropriate and that its physical protection system will "provide high assurance that activities involving the MOX fuel will not be inimical to the common defense and security nor constitute an

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<sup>1</sup> See *Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), unpublished "Final Partial Initial Decision (Issues Relating to BREDL Security Contention 5)" (Mar. 10, 2005).

unreasonable risk to the public health and safety.”<sup>2</sup> The Board later issued a public redacted version of PID-Security.<sup>3</sup>

PID-Security was the Board’s final order in this case, and none of the parties sought review of it under 10 C.F.R. § 2.786(b).<sup>4</sup> Nevertheless, pursuant to 10 C.F.R. § 2.786(a), the Commission decided to review the Board’s order *sua sponte*.<sup>5</sup> The Commission specifically requested the parties to brief the issue of the necessity of the conditions the Board imposed for purposes of receipt of the MOX lead test assemblies.<sup>6</sup> The parties submitted their initial briefs on May 2, 2005, and their reply briefs on May 9, 2005.

In their initial briefs, Duke and the NRC Staff argued that none of the four license conditions the Board imposed was necessary. BREDL offered no substantive arguments about the conditions. Instead, BREDL insisted that the Commission’s inquiry is moot, that the Commission’s question is unreasonably and unfairly broad, and that the license conditions are appropriate to ensure that Duke’s promises are fully enforceable.

Duke, in its reply brief, addressed the questions BREDL raised about mootness and the appropriateness of the Commission’s *sua sponte* review. The NRC Staff replied to Duke’s initial brief only to point out one topic the Staff considered beyond the Commission’s request for briefs, and declined to reply to BREDL’s initial brief. BREDL’s reply brief sought to defend the conditions the Board imposed.<sup>7</sup>

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<sup>2</sup> See “Notice of Final Partial Initial Decision (Issues Relating to BREDL Security Contention 5)” (Mar. 10, 2005). One day before the Board issued PID-Security, BREDL filed a petition for expedited discretionary review by the Commission of the NRC Staff’s No Significant Hazards Consideration determination. The Staff had issued Duke’s requested license amendment and regulatory exemptions on March 3, 2005. BREDL contended that the Staff’s decision was unlawful because it was made before the Board issued a decision on BREDL’s security contention. Under our rules, “No petition or other request for review of or hearing on the staff’s significant hazards consideration determination will be entertained by the Commission. The staff’s determination is final, subject only to the Commission’s discretion, *on its own initiative*, to review the determination.” 10 C.F.R. § 50.58(b)(6) (emphasis added). See *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), CLI-01-7, 53 NRC 113, 118 (2001). In any case, BREDL’s motion became moot when the Board issued PID-Security on March 10, 2005.

<sup>3</sup> See LBP-05-10, 61 NRC 241 (2005) (“PID-Public”).

<sup>4</sup> The Commission’s new adjudicatory rules 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). Hence, our references to our adjudicatory rules are to their former versions.

<sup>5</sup> See CLI-05-10, 61 NRC 238 (2005).

<sup>6</sup> See *id.*

<sup>7</sup> On May 6, 2005, BREDL filed a motion to exceed the page limitation the Commission set in CLI-05-10 for the parties’ reply briefs. Rather than presenting its main argument in the initial brief, BREDL has attempted to justify the Board’s conditions belatedly in its reply brief. The Commission

(Continued)

## II. DISCUSSION

Duke has already complied with the license conditions set by the Board. Duke's compliance may well render this matter moot, as BREDL claims, but it does not preclude the Commission from reviewing the conditions. Under both NRC rules and longstanding agency precedent, the Commission has the authority to review interlocutory and final licensing board decisions on its own motion.<sup>8</sup> The Commission's practice is to address novel legal or policy issues and to provide appropriate guidance.<sup>9</sup> The Commission will do so even in moot cases if necessary to clarify important issues for the future. The Commission is not subject to the constitutional "case or controversy" requirement that prevents federal courts from deciding moot questions.<sup>10</sup>

As is clear from the record in this proceeding, the issue in this case is not whether Catawba must counter the design basis threat (DBT) outlined in 10 C.F.R. § 73.1. As Duke explained in its brief before the Commission, as a Part 50 licensed reactor, Catawba unquestionably is required to protect against the "radiological sabotage" DBT defined in 10 C.F.R. § 73.1(a)(1).<sup>11</sup> Additionally, as Duke also recognized, "[t]here is no argument that for the period of time from receipt until the MOX fuel lead assemblies are irradiated, the DBT in 10 C.F.R. § 73.1(a)(2) for theft will apply."<sup>12</sup> In fact it is precisely because Duke

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disapproves this tactic, which deprives Duke and the NRC Staff of an opportunity to reply directly to BREDL's substantive arguments about the license conditions. See *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 225 (2004) ("new arguments may not be raised for the first time in a reply brief"); *Consumers Power Co.* (Midland Plant, Units 1 and 2), ALAB-115, 6 AEC 257 (1973) (Petitioners failed to show why a document's contents could not have been furnished in a more timely fashion). Nevertheless, to ensure that we consider all perspectives, we do not reject BREDL's brief out of hand. We grant BREDL's motion and have considered the fourteen-page reply brief.

<sup>8</sup> See, e.g., *Curators of the University of Missouri* (TRUMP-S Project), CLI-91-7, 33 NRC 295 (1991); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-87-2, 25 NRC 267 (1987). See also 10 C.F.R. § 2.786 (former rules). Under the Commission's new adjudicatory procedural rules, 10 C.F.R. § 2.341 provides for Commission *sua sponte* review.

<sup>9</sup> See *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 20, 23, 25 (1998).

<sup>10</sup> See *Texas Utilities Generating Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), ALAB-714, 17 NRC 86, 93 (1983), citing *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-455, 7 NRC 41, 54 (1978), remanded on other grounds *sub nom. Minnesota v. NRC*, 602 F.2d 412 (D.C. Cir. 1979). We ordinarily do not decide moot questions — see, e.g., *Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-8, 37 NRC 181, 184-85 (1993) — but we do so here to avoid any implication that we approve the Board-imposed security conditions in this case.

<sup>11</sup> See "Duke Energy Corporation's Brief on Review of the Licensing Board's Final Order Addressing Security Contention 5," May 2, 2005, at 7 [Brief is Designated as Safeguards Information].

<sup>12</sup> *Id.* at 8.

would be required to meet various regulatory provisions in support of the “theft” DBT that the licensee found it necessary to request exemptions from some of these requirements. Therefore, the precise issue in this case was not whether the DBT applied, but whether or not the evidence established that the regulatory standard for authorizing exemptions was satisfied.<sup>13</sup> That standard provides that an exemption may be granted if it is “authorized by law and will not endanger life or property or the common defense and security, and [is] otherwise in the public interest.”<sup>14</sup> Based on our review of the record, the Commission believes that the Board accorded insufficient weight to the compelling arguments presented by Duke and the NRC Staff detailing why the granting of the requested exemptions met this regulatory standard and would not endanger life or property or the common defense and security.<sup>15</sup>

It appears that, in large part, the Board was unpersuaded by the NRC Staff’s and Duke’s arguments regarding the assurances provided in the wake of the exemption requests because the Board determined that the MOX fuel material could be an attractive target for terrorists.<sup>16</sup> We have some difficulty with this attractiveness determination. First, we find the Board’s generalized assumptions about the relatively strong attractiveness of the MOX fuel as a target in contradiction to the weight of the evidence established in the record demonstrating otherwise.<sup>17</sup>

Second, the central issue in this case is not whether there would be any interest in stealing the material — our regulations assume there is — but whether, as our exemption rule requires, the licensee presented sufficient evidence to support the assurance of the protection of public health and safety in light of the theft risk. Based upon our review of the record, the Licensee and Staff did just that by demonstrating, for example, that the Licensee’s security measures and forces could thwart either of BREDL’s two formulated attack scenarios. The Board did not need to go further and offer its own interpretation of our DBT regulations.

Therefore, we find the additional security conditions imposed by the Board unnecessary to ensure compliance with the exemption standard. As our order today is public, we do not discuss in detail the Board-imposed security conditions. It suffices to say that we view the conditions as unnecessary to support the requested exemptions. In future cases, any legal questions about the interpretation of the DBT regulatory requirements that arise in the course of considering the admission

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<sup>13</sup> See CLI-04-6, 59 NRC 62, 72 (2004); CLI-04-19, 60 NRC 5, 8, 10-11 (2004).

<sup>14</sup> 10 C.F.R. § 73.5.

<sup>15</sup> See *id.*

<sup>16</sup> See “Final Partial Initial Decision (Issues Relating to BREDL Security Contention 5) at 19-24, 35-38, 72 [Decision is designated Safeguards Information].

<sup>17</sup> See Hearing Transcript at 7-8, 3884-85, 3976-77, 5112-47, 5273-75, 4260-63; Staff Findings at 21-25. [Transcript and Findings are designated Safeguards Information].

of contentions or later in the adjudication should be referred to the Commission for appropriate guidance in lieu of needless speculation and misinterpretation.<sup>18</sup>

### III. CONCLUSION

For the reasons above, we disapprove the four license conditions imposed by the Board in its March 10 PID-Security decision.

IT IS SO ORDERED.

For the Commission<sup>19</sup>

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 20th day of June 2005.

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<sup>18</sup> See 10 C.F.R. §§ 2.718(g) and 2.730(f) under the regulations applicable to the present case, and see 10 C.F.R. §§ 2.319(l) and 2.323(f) for future cases operating under the revised provisions of Part 2. The Commission encourages boards and presiding officers to certify novel legal or policy questions early in a proceeding. See *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 23 (1998).

<sup>19</sup> Commissioners McGaffigan and Lyons were not present for affirmation of this Memorandum and Order. Had they been present, they would have affirmed their prior votes.

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. 50-29-OLA**

**YANKEE ATOMIC ELECTRIC  
COMPANY  
(Yankee Nuclear Power Station)**

**June 29, 2005**

The Commission, while not fully in agreement with the Board's rationale, affirms the Board's decision to grant Citizens Awareness Network's hearing request and petition to intervene.

**RULES OF PRACTICE: INTERLOCUTORY APPEALS**

When we receive an "interlocutory appeal as of right" from an applicant or licensee challenging the admissibility of contentions, 10 C.F.R. § 2.311(c) provides that we consider "whether the request [for hearing and/or] petition [to intervene] should have been wholly denied." To answer this question, we need to determine whether the petitioner has standing to intervene and whether at least one of the admitted contentions satisfies the requirements set forth in 10 C.F.R. § 2.309(f)(1). Section 2.309(f)(1) imposes the following procedural requirements:

A request for hearing or petition for leave to intervene must set forth with particularity the contentions sought to be raised. For each contention, the request or petition must:

- (i) Provide a specific statement of the issue of law or fact to be raised or controverted;
- (ii) Provide a brief explanation of the basis for the contention;

(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;

(v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; 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.

While newly codified in section 2.309(f)(1), these are the same procedural standards that long have governed admissibility of contentions in NRC adjudications.

## **REACTOR LICENSE TERMINATION**

### **LICENSE TERMINATION PLAN**

Section 50.82 of 10 C.F.R. governs the termination of a power reactor license. Under subsection (a)(9) of that section, a license termination application must be supported by an LTP. The provisions of 10 C.F.R. §§ 50.82(a)(9)(ii)(A)-(H) and 50.82(a)(10) govern an adjudication involving the adequacy of an LTP. The first of these two subsections requires the licensee to include the following in its LTP:

- (A) A site characterization;
- (B) Identification of remaining dismantlement activities;
- (C) Plans for site remediation;
- (D) Detailed plans for the final radiation survey;
- (E) A description of the end use of the site, if restricted;
- (F) An updated site-specific estimate of remaining decommissioning costs; . . .
- (G) A supplement to the environmental report, pursuant to § 51.53, describing any new information or significant environmental change associated with the licensee's proposed termination activities; [and]
- (H) Identification of parts, if any, of the facility or site that were released for use before approval of the [LTP].

Section 50.82(a)(10) provides an additional, and far more general, test for LTPs: they must demonstrate "that the remainder of decommissioning activities



will be performed in accordance with the regulations . . . , will not be inimical to the common defense and security or to the health and safety of the public, and will not have a significant effect on the quality of the environment.” These criteria bound the potential procedural and substantive issues in an adjudication of an LTP’s legal adequacy.

**REACTOR LICENSE TERMINATION: SITE CHARACTERIZATION; SITE REMEDIATION**

The Commission declines to develop a “bright line” test for when a site characterization or site remediation plan is “final” or “complete” enough to support approval of an LTP. The Commission does not agree with the Board insofar as the Board may have deemed a site characterization incomplete on the grounds that additional site characterization may be obtained at a later time. On the other hand, the Commission agrees with the Board that the requirement of “a site characterization” involves more than methodologies or plans for characterization.

**REACTOR LICENSE TERMINATION: SITE CHARACTERIZATION**

It appears that determining what constitutes adequate site characterization and site remediation plans is dependent, to a large extent, on site-specific conditions. At a minimum, the site characterization and remediation plans must provide sufficient information to allow the NRC to determine the extent and range of expected radioactive contamination, to determine whether estimates for remaining decommissioning costs are reasonable, to determine the likely schedule for remaining activities, and to support the final site survey to verify compliance with Part 20 release limits — the ultimate goal of the decommissioning process. With respect to an adequate site characterization, it seems reasonable to interpret the regulation as requiring LTP submissions to contain the type of information discussed in the NUREG-1700 acceptance criteria, including a reasonably bounded discussion of future activities to refine site characterization information. Thus, contentions asserting nothing more than that a site characterization is incomplete, ongoing, or not final, on the basis that the licensee plans to conduct further characterization, including confirmatory characterization and monitoring activities, would be inadmissible. However, contentions arguing that the site characterization and remediation plan are insufficient to support the conclusions required to satisfy the license termination rule and proposals on how the licensee will deal with the remaining decommissioning processes could be admissible provided they contain appropriately supported bases. One example of such a contention could involve a site characterization that fails to address a radionuclide the petitioner has a

good basis to believe is present at the site. Another example could involve a site characterization that is so over-broad or vague as not to allow sound planning.

#### **REACTOR LICENSE TERMINATION: SITE CHARACTERIZATION**

The purpose of site characterization is to define relevant features of the soil, water, and buildings in order to assess risks and develop adequate plans to complete decommissioning. The LTP must deal with the correct issues — those already identified and those reasonably anticipated. The key question at the LTP submission stage is whether the site characterization is sufficiently detailed to allow evaluation of the adequacy of each element prescribed by 10 C.F.R. § 50.82(a)(9) and for making the findings required for approval of the LTP (*see* 10 C.F.R. § 50.82(a)(10)).

#### **RULES OF PRACTICE: ADJUDICATORY HEARINGS**

##### **LICENSE TERMINATION PLAN**

##### **REACTOR LICENSE TERMINATION**

Our regulations call for adjudicatory hearings at the LTP stage of decommissioning, not at the license termination stage. *See Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 206-07 (1998). But we cannot agree with the Board's implication that hearings on *plans*, rather than on actual termination, are therefore meaningless. It is the LTP, after all, that governs how the property will be decontaminated. And LTPs, unlike license termination, are implemented by license amendment, an agency action that triggers a hearing opportunity by law. *See Atomic Energy Act* § 189(a), 42 U.S.C. § 2239(a). This is true not only when the LTP is initially approved and made part of the license by license amendment *with such conditions and limitations as deemed appropriate and necessary* (*see* § 50.82(a)(10)), but also later if new developments require a license amendment to approve modifications to the LTP that cannot be considered within the scope of the original amendment approving the LTP.

#### **RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY); ADMISSIBILITY OF CONTENTIONS**

The criteria for contention admission in 10 C.F.R. § 2.309(f) is strict by design and should be rigorously followed by our adjudicatory bodies.

## LICENSE TERMINATION PLAN

### REACTOR LICENSE TERMINATION

#### RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY); ADMISSIBILITY OF CONTENTIONS

We strongly caution that with regard to future contentions associated with an LTP, the Board should consider our clarification of LTP requirements in this decision and ensure that proponents of a contention demonstrate that it is within the scope of the proceeding, has an adequate basis supported by facts or opinion, and raises a genuine dispute regarding an issue material to the findings the NRC must make prior to approval of the LTP.

## MEMORANDUM AND ORDER

This proceeding arises from Yankee Atomic Electric Company's (Yankee's) license amendment request to incorporate a new license condition addressing the license termination plan (LTP) for its nuclear power facility in Rowe, Massachusetts. On November 22, 2004, the Licensing Board issued a Memorandum and Order, LBP-04-27, granting Citizens Awareness Network's (CAN's) hearing request and petition to intervene.<sup>1</sup> The NRC Staff and Yankee filed separate appeals of the Board's decision. CAN opposed both appeals. Today, while not fully in agreement with the Board's rationale, we affirm the Board's decision.

### I. BACKGROUND

Yankee ceased operating its nuclear power facility in Rowe, Massachusetts, on October 1, 1991, permanently closed the plant the following year, and submitted a Decommissioning Plan in 1994.<sup>2</sup> In May 1997, Yankee submitted an LTP to the NRC for approval. In May 1999, Yankee, intending to use a different survey methodology, withdrew its LTP application.<sup>3</sup> The plant is now about 90% dismantled, and Yankee expects the decommissioning process to be completed

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<sup>1</sup> See LBP-04-27, 60 NRC 539 (2004).

<sup>2</sup> Yankee's initial decommissioning activities triggered a lawsuit, *Citizens Awareness Network v. NRC*, 59 F.3d 284 (1st Cir. 1995), and ultimately a series of agency adjudicatory decisions culminating in a Board order finding that Petitioners had submitted no contentions warranting further hearings. See *Yankee Atomic Electric Co. (Yankee Nuclear Power Station)*, LBP-96-18, 44 NRC 86, *pet'n for review denied*, CLI-96-9, 44 NRC 112 (1996).

<sup>3</sup> Yankee moved to terminate the earlier adjudicatory proceeding, and the Licensing Board granted the request. See LBP-99-27, 50 NRC 45 (1999).

by the end of calendar year 2005. In November 2003, in accordance with 10 C.F.R. § 50.82(a)(9), Yankee filed a fresh license amendment request seeking approval of its new LTP.<sup>4</sup> In June 2004, the NRC Staff issued a Notice of Opportunity for Hearing on the LTP.<sup>5</sup> In response, CAN filed a timely hearing request. Both Yankee and the NRC Staff opposed CAN's request on the ground that CAN, although it has standing to intervene, did not submit an admissible contention. In LBP-04-27, the Board granted CAN's hearing request and admitted two contentions.

The first admitted contention (CAN's Contention 2) states:

The LTP should not be approved at this time because Yankee Atomic has failed to provide documentation of the source, cause, and plan for remediation of the current high levels of tritium contamination in the ground water on site, in violation of 10 C.F.R. Part 20, subpart E, § 50.52, § 50.82. The samples collected in 2003 following the draining and emptying of the fuel pool still show an extremely high concentration of tritium (e.g., >45,000 pCi/L in monitoring well MW-107C). The LTP does not resolve the question as to whether this high level of contamination was previously overlooked or whether it relates to a new or recent release connected with work on the fuel pool in 2003. A supplemental Environmental Report and supplemental EIS should be prepared to explain the source and cause of the contamination, demonstrate that it is contained within the site, and provide a plan for cleaning up the contamination.

As support for the contention, CAN referred to the declaration of hydrogeologist, Robert J. Ross.

Contention 3 alleges that YAEC has failed to adequately characterize several possible contaminated zones within the groundwater. Contention 4 alleges that the LTP does not completely characterize the vertical extent of subsurface soil contamination beneath facility structures. The Board combined CAN's Contentions 3 and 4 to state that the LTP fails to characterize groundwater and subsurface soil contamination on the site to the extent necessary to provide the required assurance that the radiation protection standards of 10 C.F.R. Part 20 will be satisfied.

Yankee and the NRC Staff separately appeal the Board's decision to admit the contentions and grant a hearing.<sup>6</sup>

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<sup>4</sup>The NRC treats LTPs as license amendments. See *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 205 (1998); 10 C.F.R. § 50.82(a)(10).

<sup>5</sup>Biweekly Notice: "Applications and Amendments to Facility Operating Licenses Involving No Significant Hazards Considerations," 69 Fed. Reg. 34,696, 34,707 (June 22, 2004).

<sup>6</sup>On the same day Yankee filed its appeal, it also filed with the Commission a motion for stay of this proceeding. On December 6, the Board issued a stay of LBP-04-27, rendering Yankee's stay motion moot. See unpublished Board Memorandum (Dec. 6, 2004).

## II. DISCUSSION

### A. Legal Standards of Review

When we receive an “interlocutory appeal as of right”<sup>7</sup> from an applicant or licensee challenging the admissibility of contentions, 10 C.F.R. § 2.311(c) provides that we consider “whether the request [for hearing and/or] petition [to intervene] should have been wholly denied.” To answer this question, we need to determine whether the petitioner has standing to intervene (a matter not at issue here)<sup>8</sup> and whether at least one of the admitted contentions satisfies the requirements set forth in 10 C.F.R. § 2.309(f)(1) (a matter very much at issue). Section 2.309(f)(1) imposes the following procedural requirements:

A request for hearing or petition for leave to intervene must set forth with particularity the contentions sought to be raised. For each contention, the request or petition must:

- (i) Provide a specific statement of the issue of law or fact to be raised or controverted;
- (ii) Provide a brief explanation of the basis for the contention;
- (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;
- (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor’s/petitioner’s position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; 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

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<sup>7</sup> See, e.g., *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-9, 55 NRC 245, 249 n.13 (2002) (construing former 10 C.F.R. § 2.714a(c), the predecessor regulation of section 2.311(c)). See 10 C.F.R. § 2.311, regarding interlocutory appeals as of right, and the far more rigorous standards in 10 C.F.R. § 2.341(f)(ii), regarding discretionary interlocutory appeals. CAN mistakenly considers the NRC Staff’s appeal to be discretionary, and therefore seeks to apply the standards set forth in the latter regulation. See CAN’s Brief in Opposition to NRC Staff at 12; “Citizens Awareness Network’s Brief in Opposition to Yankee Atomic Electric Company’s Notice of Appeal of LBP-04-27, Order Granting Hearing, and Brief” at 10-12 & n.8 (Dec. 13, 2004). We do not consider section 2.341(f)(ii)’s standards for discretionary review — which are simply inapplicable — in today’s decision.

<sup>8</sup> Neither Yankee nor the Staff contests CAN’s standing. The Board nevertheless briefly (and quite appropriately) addressed this issue and agreed with the parties that CAN has standing. See LBP-04-27, 60 NRC at 542 n.3.

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.

While newly codified in section 2.309(f)(1), these are the same procedural standards that long have governed admissibility of contentions in NRC adjudications.<sup>9</sup>

As for the substantive standards applicable in this proceeding, 10 C.F.R. § 50.82 governs the termination of a power reactor license. Under subsection (a)(9) of that section, a license termination application must be supported by an LTP. The provisions of 10 C.F.R. §§ 50.82(a)(9)(ii)(A)-(H) and 50.82(a)(10) govern an adjudication (such as this) involving the adequacy of an LTP. The first of these two subsections requires the licensee to include the following in its LTP:

- (A) A site characterization;
- (B) Identification of remaining dismantlement activities;
- (C) Plans for site remediation;
- (D) Detailed plans for the final radiation survey;
- (E) A description of the end use of the site, if restricted;
- (F) An updated site-specific estimate of remaining decommissioning costs; . . .
- (G) A supplement to the environmental report, pursuant to § 51.53, describing any new information or significant environmental change associated with the licensee's proposed termination activities; [and]
- (H) Identification of parts, if any, of the facility or site that were released for use before approval of the [LTP].<sup>10</sup>

Section 50.82(a)(10) provides an additional, and far more general, test for LTPs: they must demonstrate "that the remainder of decommissioning activities will be performed in accordance with the regulations . . . , will not be inimical to the common defense and security or to the health and safety of the public, and will not have a significant effect on the quality of the environment." These criteria bound the potential procedural and substantive issues in an adjudication of an LTP's legal adequacy.<sup>11</sup>

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<sup>9</sup> See the former 10 C.F.R. § 2.714 (2003). See generally *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358-59 (2001).

<sup>10</sup> 10 C.F.R. § 50.82(a)(9)(ii).

<sup>11</sup> See *Yankee Nuclear*, CLI-98-21, 48 NRC at 204-05 ("the scope of the LTP application (and therefore the scope of this proceeding) is defined solely by the terms of 10 C.F.R. § 50.82(a)(10), as read in light of the filing requirements of 10 C.F.R. § 50.82(a)(9)(ii)(A)-(G)"). The above-quoted language omits any reference to subsection (H) because the Commission promulgated subsection (H) 5 years after the issuance of CLI-98-21. See Final Rule: "Releasing Part of a Power Reactor Site or Facility for Unrestricted Use Before the NRC Approves the License Termination Plan," 68 Fed. Reg. 19,711, 19,727 (Apr. 22, 2003).

## B. Significance of Ongoing Nature of License Termination Activities

The dispute about admissibility of CAN's contentions raises the questions: (1) whether 10 C.F.R. § 50.82(a)(9)(ii) requires an LTP to include a "final" and "complete" site characterization, and (2) what constitutes sufficient information in a site remediation plan to support NRC approval of a LTP submittal.

These are issues of first impression before the Commission. Although our regulations call for "a site characterization" and "plans for site remediation," those terms are not defined.<sup>12</sup> Because these questions are closely related, we will consider them in tandem.

"Site characterization" and "plans for site remediation" are two of the elements required by 10 C.F.R. § 50.82(a)(9)(ii) to be included in a licensee's LTP submittal. To determine what constitutes sufficient site characterization and site remediation plans for purposes of meeting the LTP requirements, we first turn to our regulations and enabling statute (here the Atomic Energy Act (AEA)). As alluded to above, these terms are not defined in either place. In the absence of regulatory definitions, we examine the plain meaning of the words.

The word "characterization" is defined as "the act, process, or result of characterizing," while the word "characterize" means "to describe the essential character or quality of."<sup>13</sup> The term "process" supports a view that site characterization is ongoing, not complete. The term "result" tends to imply a form of finality or comprehensiveness, although describing the "essential" quality or character of the site suggests something less than complete detail or a final inventory is required.

An interpretation that embraces the potential for additional, more detailed data is also supported by the lack of such modifying terms as "complete" or "final" in reference to "a site characterization" and the contrast between that general requirement of "a site characterization" and the requirement of "[d]etailed plans for the final radiation survey." This interpretation is also buttressed by the fact the LTP as a whole is a *plan*. Yet, the absence of the word "plan" in specific association with the requirement of "a site characterization" contrasts with the use of the limiting term "plans" in regard to site remediation and the final radiation survey, indicating that more than mere plans or methodologies for site characterization is required.

The word "remediation" is defined as the "act or process of remedying."<sup>14</sup> The word "plan" has meanings ranging from "a method of achieving something" to a "detailed and systematic formulation of a large-scale campaign or program

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<sup>12</sup> See 10 C.F.R. § 50.82(a)(9)(ii)(A) & (C).

<sup>13</sup> See *Webster's Third New International Dictionary* at 376 (1981).

<sup>14</sup> *Id.* at 1920.

of action.’’<sup>15</sup> Given that these definitions are not sufficient to resolve fully the questions of interpretation in this case, we next turn to the Statement of Considerations in support of promulgation of these provisions.

Twenty years ago, prior to enactment of our current regulatory regime for license termination, the NRC set forth technical and financial criteria for a proposed decommissioning rule.<sup>16</sup> The proposed rule required a preliminary decommissioning plan, including a site-specific cost estimate, 5 years before permanent cessation of operations. The licensee had to submit a detailed decommissioning plan to the NRC within 2 years after permanent cessation of activities. The intent of the rule was “to assure that decommissioning of all licensed facilities will be accomplished in a safe and timely manner and that adequate licensee funds will be available for this purpose.”<sup>17</sup> Decommissioning plans were to contain “sufficient detail to demonstrate that decommissioning [*sic*] can be accomplished safely.”<sup>18</sup> The proposed rule (the then-section 50.82) specified only the major elements of decommissioning plans. The term “site characterization” was not used at all in the proposed rule, which required a discussion of planned decommissioning activities, a description of methods to assure protection of workers and the environment against radiation hazards during the decommissioning process, a description of the planned final radiation survey, and a detailed cost estimate for decommissioning and plan for assuring the availability of adequate funding.

The Commission turned again to decommissioning issues in the mid-1990s, when it issued proposed<sup>19</sup> and final rules<sup>20</sup> promulgating the current subsection 50.82(a)(9)(ii), including the disputed “site characterization” provision. The new rule sought “to clarify ambiguities in the current rule and codify practices that have been used for other licensees on a case-by-case basis.”<sup>21</sup> Although the SOC described the proposed rule as preserving the substantive elements of the 1988 regulations, it went on to state:

The current [1988] rule allows a less detailed decommissioning plan initially, with the more detailed plan nearer to the completion of decommissioning because more accurate planning can be accomplished. The termination plan would contain similar elements for consideration as the current rule requires. In particular, the proposed

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<sup>15</sup> *Id.* at 1729.

<sup>16</sup> *See* Proposed Rule: “Decommissioning Criteria for Nuclear Facilities,” 50 Fed. Reg. 5600 (Feb. 11, 1985).

<sup>17</sup> *Id.*

<sup>18</sup> *Id.* at 5602.

<sup>19</sup> Proposed Rule: “Decommissioning of Nuclear Power Reactors,” 60 Fed. Reg. 37,374 (July 20, 1995).

<sup>20</sup> Final Rule: “Decommissioning of Nuclear Power Reactors,” 61 Fed. Reg. 39,278 (July 29, 1996).

<sup>21</sup> 60 Fed. Reg. at 37,374.



rule would require that the termination plan contain a site characterization . . . plans for site remediation, detailed plans for the final radiation survey . . . .”<sup>22</sup>

The older rule did not contain such specific requirements.

The SOC for the 1996 final rule refers, in a substantive fashion, only twice to site characterization and once to site remediation plans. The first reference to both notes generally that site characterization and plans for site remediation are “necessary for the NRC to be sure that the licensee will have adequate funds to complete decommissioning and that the appropriate actions will be completed by the licensee to ensure that the public health and safety will be protected.”<sup>23</sup> The second reference to site characterization indicates that the “radiological criteria rule,” when issued, would address whether “a complete site characterization should be included at the initiation of decommissioning activities.”<sup>24</sup> But the radiological criteria rule, when it did issue a year later, did not refer to “site characterization,”<sup>25</sup> and did not address the question left open in the 1996 SOC for section 50.82.

Unfortunately, our review of relevant SOCs does little to inform our consideration of this issue. Therefore, we next turn to a review of NRC guidance documents to assist us in interpreting the site characterization and site remediation plan requirements. NUREG-1700, Rev. 1, “Standard Review Plan for Evaluating Nuclear Power Reactor License Termination Plans” was developed to guide the NRC Staff in conducting its safety reviews of LTPs and to assist licensees in the development of their LTP submittals.<sup>26</sup>

With regard to site characterization, NUREG-1700 indicates that this information is provided to

determine the extent and range of radioactive contamination on site, including structures (on a structure by structure basis and as necessary on a room by room basis), systems, components, residues, soils, and surface and ground water. On

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<sup>22</sup> *Id.* at 37,377.

<sup>23</sup> 61 Fed. Reg. at 39,289.

<sup>24</sup> *Id.* at 39,292.

<sup>25</sup> See Final Rule: “Radiological Criteria for License Termination,” 62 Fed. Reg. 39,058 (July 21, 1997).

<sup>26</sup> See NUREG-1700, “Standard Review Plan for Evaluating Nuclear Power Reactor License Termination Plans,” Rev. 1 (Mar. 2003), ADAMS Accession No. ML031270391. We recognize, of course, that guidance documents do not have the force and effect of law. See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 264 (2001); *U.S. Enrichment Corp.* (Paducah, Kentucky, Gaseous Diffusion Plant), CLI-01-23, 54 NRC 267, 280 n.37 (2001). Nonetheless, guidance is “at least implicitly endorsed by the Commission” and therefore “is entitled to correspondingly special weight.” *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-900, 28 NRC 275, 290 (1988).

the basis of the site characterization, the licensee designs final radiation surveys to evaluate all areas in which contamination previously existed, remains, or has the potential to remain.<sup>27</sup>

The document also indicates that the Staff's purpose in reviewing site characterization information is to "ensure that the site characterization presented in the LTP is complete," and to verify that the licensee data were obtained in a manner that assures the NRC Staff that the data are reliable and will support a finding that "the site will meet the decommissioning limits if characterization data is used as final survey data."<sup>28</sup> Although the word "complete" is used above to describe Staff expectation of site information of at least an adequate scope, there is also a recognition in the guidance document that licensees have the option of submitting an LTP amendment request at a time of their choosing (as long as it is at least 2 years prior to license termination), and that consequently, "the level of detail required to be submitted in the LTP will vary depending on when the licensee submits the LTP."<sup>29</sup> NUREG-1700 also goes on to specify the Staff's "Acceptance Criteria," including the criterion that "[t]he LTP site characterization is *sufficiently detailed* to allow the NRC Staff to determine the extent and range of radiological contamination of structures, systems," and other areas of the site, such as groundwater, including maximum and average contamination levels . . . ."<sup>30</sup>

With regard to site remediation plans, NUREG-1700 indicates that the information submitted by the licensee should discuss in detail "how facility and site areas will be remediated to meet the NRC's release criteria" found in Subpart E of 10 C.F.R. Part 20.<sup>31</sup> Other provisions that are instructive, given the contentions in this case, are found under the "Acceptance Criteria" heading. The first relevant provision states that the licensee should address "changes in radiological controls to be implemented to control radiological contamination." The second relevant

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<sup>27</sup> NUREG-1700 at 8.

<sup>28</sup> *Id.* at 9. See also Reg. Guide 1.179, "Standard Format and Content of License Termination Plans for Nuclear Power Reactors" at 3 (Jan. 1999), ADAMS Accession No. ML003780514, which contains similar information about the amount of detail required for the LTP. The Regulatory Guide states that, "for the most part, the LTP will contain a final site characterization," and then specifically describes the purpose of the site characterization in the LTP as "providing information . . . to ensure that final radiation surveys are conducted to cover all areas where contamination existed, remains, or has the potential to exist or remain." *Id.* at 2, 3.

<sup>29</sup> *Id.* at 4.

<sup>30</sup> *Id.* at 9 (emphasis added). A pertinent Staff evaluative finding is whether "the licensee met the objective of providing an *adequate* site characterization as required by 10 C.F.R. 50.82(a)(9)(ii)(A)." *Id.* at 18 (emphasis added).

<sup>31</sup> *Id.* at 10.

provision, which includes a number of subsections, indicates that the licensee's submittal should discuss in detail:

how facility and site areas will be remediated to meet the proposed residual radioactivity levels (DCGLs) for license termination. Discussions should focus on any unique techniques or procedures used to evaluate whether the DCGLs have been met including . . . a detailed description of the techniques that will be employed to remove or remediate surface and subsurface soils, groundwater, and surface water and sediments.<sup>32</sup>

Although these guidance documents are informative, the Commission declines to develop a "bright line" test for when a site characterization or site remediation plan is "final" or "complete" enough to support approval of an LTP. We do not agree with the Board insofar as the Board may have deemed a site characterization incomplete on the grounds that additional site characterization may be obtained at a later time. For example, the mere fact that ongoing monitoring, confirmatory investigations, and surveys (e.g., the final site survey) will provide additional data and results does not by itself establish the insufficiency of a site characterization. On the other hand, we agree with the Board that the requirement of "a site characterization" involves more than methodologies or plans for characterization.

It appears that determining what constitutes adequate site characterization and site remediation plans is dependent, to a large extent, on site-specific conditions. At a minimum, the site characterization and remediation plans must provide sufficient information to allow the NRC to determine the extent and range of expected radioactive contamination, to determine whether estimates for remaining decommissioning costs are reasonable, to determine the likely schedule for remaining activities, and to support the final site survey to verify compliance with Part 20 release limits — the ultimate goal of the decommissioning process. With respect to an adequate site characterization, it seems reasonable to interpret the regulation as requiring LTP submissions to contain the type of information discussed in the NUREG-1700 acceptance criteria, including a reasonably bounded discussion of future activities to refine site characterization information. Thus, contentions asserting nothing more than a site characterization is incomplete, ongoing, or not final, on the basis that the licensee plans to conduct further characterization, including confirmatory characterization and monitoring activities would be inadmissible. However, contentions arguing that the site characterization and remediation plan are insufficient to support the conclusions required to satisfy the license termination rule and proposals on how the licensee will deal with

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<sup>32</sup> *Id.* at 11. NUREG-1700 describes the pertinent evaluative finding as whether the licensee has "adequately described its plans for remediation as required by 10 C.F.R. 50.82(a)(9)(ii)(C)." *Id.* at 18.

the remaining decommissioning processes could be admissible provided they contain appropriately supported bases.<sup>33</sup> This being said, we next turn to CAN's contentions in this case.<sup>34</sup>

### C. CAN's Contentions

CAN's first admitted contention (CAN's Contention 2) states:

The LTP should not be approved at this time because Yankee Atomic has failed to provide documentation of the source, cause, and plan for remediation of the current high levels of tritium contamination in the ground water on site, in violation of 10 C.F.R. Part 20, subpart E, § 50.52, § 50.82. The samples collected in 2003 following the draining and emptying of the fuel pool still show an extremely high concentration of tritium (e.g., >45,000 pCi/L in monitoring well MW-107C). The LTP does not resolve the question as to whether this high level of contamination was previously overlooked or whether it relates to a new or recent release connected with work on the fuel pool in 2003. A supplemental Environmental Report and supplemental EIS should be prepared to explain the source and cause of the contamination, demonstrate that it is contained within the site, and provide a plan for cleaning up the contamination.

In support of this contention, CAN asserts that site characterization must be both detailed and final. According to CAN, "[t]he sole ambiguity of [this regulatory] provision resides in whether the requisite 'site characterization' is a final document or a continuing activity."<sup>35</sup> CAN argues that the LTP must include a complete site characterization; i.e., it must "take[ ] the form of a relatively fixed road map of conditions on site"<sup>36</sup> and not be a "status report" on ongoing site characterization activities.

Yankee, on the other hand, insists that site characterization is an ongoing process and does not need to be detailed or final at the LTP stage. Yankee

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<sup>33</sup>One example of such a contention could involve a site characterization that fails to address a radionuclide the petitioner has a good basis to believe is present at the site. Another example could involve a site characterization that is so over-broad or vague as not to allow sound planning.

<sup>34</sup>In its December 6, 2004, unpublished memorandum, the Board reasoned that, should the Commission accept Yankee's interpretation of the LTP regulations, "an essential underpinning of the grant of the hearing request would be removed." *Id.*, slip op. at 3. Should the Board's (and CAN's) interpretation be upheld, "the necessary consequence would appear to be that the Staff would have to treat the LTP on file as incomplete." *Id.* The latter, according to the Board, would require Yankee to resubmit the LTP at a later date, and give rise to a fresh opportunity for hearing. As our analysis indicates, we do not fully adopt either Yankee's or the Board's interpretation of the LTP regulations in permitting this proceeding to go forward.

<sup>35</sup>CAN's Brief in Opposition to Yankee at 16.

<sup>36</sup>*Id.*

claims that our regulations inherently recognize that decommissioning work is not necessarily complete at the time the licensee submits the LTP. Thus, says Yankee, the “regulations contemplate that an LTP establish a *process* leading to license termination”<sup>37</sup> and, “[a]t the LTP stage, there can be no expectation that all characterization (i.e., all monitoring and surveys) will be complete.”<sup>38</sup> Yankee argues that a site characterization need only “be sufficiently detailed to provide data for planning further decommissioning activities as well as the final survey program.”<sup>39</sup> According to Yankee, “the level of detail in the LTP will vary depending on the nature of activities *remaining* to be performed”<sup>40</sup>; therefore, “[t]he issue for hearing in the present case . . . is whether the LTP provides the methodologies that will be used to perform, as necessary, remediation activities of residual radioactivity and the criteria to demonstrate compliance with the radiological criteria for license termination . . . .”<sup>41</sup> Yankee asserts that, were CAN correct in its construction of the phrase “site characterization,” both the hearing opportunity and the end of the hearing would necessarily be delayed “until *after* the LTP has been fully implemented and acceptable results have been demonstrated”<sup>42</sup> — not the result, Yankee maintains, the Commission was looking for when it promulgated the current version of section 50.82.

In admitting CAN’s Contention 2, the Board considered and rejected Yankee’s argument that a contention, to be admissible, cannot merely fault the incompleteness of the site characterization process described in the LTP. In a related vein, the Board also drew attention to a second perceived flaw in Yankee’s reasoning: if the characterization of the site is incomplete, the remediation plan addressing the contamination disclosed during the site characterization activities must likewise be incomplete.<sup>43</sup> While acknowledging that “a substantial amount of site characterization already has been accomplished,”<sup>44</sup> the Board viewed either of these two flaws as sufficient grounds for admission of Contention 2. The Board referenced, in particular, Yankee’s acknowledgment of ongoing groundwater investigations and Yankee’s statement that as the investigations progress, “actions will be taken, including further analyses or *possibly remediation*, to ensure that the site release

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<sup>37</sup> Yankee’s Appeal Brief at 12 (emphasis in original).

<sup>38</sup> *Id.* at 15.

<sup>39</sup> *Id.* at 16, quoting Regulatory Guide 1.179, “Standard Format and Content of License Termination Plans for Nuclear Power Reactors” at 3 (Jan. 1999).

<sup>40</sup> *Id.* at 13 (emphasis in original).

<sup>41</sup> *Id.* at 14.

<sup>42</sup> *Id.* at 18-19 (emphasis in original).

<sup>43</sup> LBP-04-27, 60 NRC at 545.

<sup>44</sup> *Id.* at 544.

criteria are met.”<sup>45</sup> Finally, the Board indicated that, because CAN will not have an opportunity to challenge the site characterization in a later adjudication after approval of the LTP, Yankee’s “process”-oriented interpretation of section 50.82 would make a “mockery” of the hearing rights provided to CAN by our *Federal Register* notice.<sup>46</sup>

CAN’s Contention 3 alleged that Yankee failed to adequately characterize several possible contaminated zones within the groundwater. CAN’s Contention 4 alleges that the LTP does not completely characterize the vertical extent of subsurface soil contamination beneath facility structures. The Board combined CAN’s Contentions 3 and 4 to state that the LTP fails to characterize groundwater and subsurface soil contamination on the site to the extent necessary to provide the

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<sup>45</sup> *Id.* at 545, quoting section 2.7.4 of the September 2, 2004 Draft Revision of the LTP (emphasis supplied by the Board). The Staff and Yankee both point to the fact that Yankee’s LTP does go further in addressing whether remediation will be required. Yankee’s Appeal Brief at 24; NRC Staff Appeal Brief at 6. For instance, in section 4.2.3 of the LTP (November 24, 2003), Yankee stated that “[c]haracterization data available to date indicated that no remediation of surface or groundwaters will be required at YNPS to meet the site release criteria.” While we have not reviewed the original or revised LTP in detail, we note that the parties may have to address, as the proceeding moves forward to summary disposition or development of the record, the bases and impact of the Licensee’s determinations that the QA program had been adjusted to account for the new information regarding tritium concentrations (e.g., one well with concentrations greater than the EPA standard for tritium in drinking water) and “the dose consequence is insignificant and does not change the strategy for going forward towards FSS.” *Id.* at 2-21 (section 2.7.4 Ongoing Groundwater Investigation). It is possible that Yankee’s revised LTP submittal satisfies many of the Petitioner’s concerns with regard to tritium contamination and remediation. While it may well be that the tritium involved here, from a technical standpoint, will require little or no remediation as the Applicant suggests, such a substantive conclusion is now more appropriately handled through summary disposition or after evidence has been presented, rather than at the contention admission stage.

<sup>46</sup> *Id.* at 544. The Board stated that under Yankee’s interpretation of “site characterization”:

CAN cannot raise any questions regarding tritium contamination at this point . . . because the characterization of the scope and significance of that contamination is still ongoing, with the consequence that the matter and nature of possible necessary remediation measures is likewise beyond present determination. Once that characterization has been completed, however, CAN will not have an opportunity to be heard regarding the results of the characterization in terms of the need for remediation of the tritium contamination.

*Id.* It is true that our regulations call for adjudicatory hearings at the LTP stage of decommissioning, not at the license termination stage. See *Yankee Nuclear*, CLI-98-21, 48 NRC at 206-07. But we cannot agree with the Board’s implication that hearings on *plans*, rather than on actual termination, are therefore meaningless. It is the LTP, after all, that governs how the property will be decontaminated. And LTPs, unlike license termination, are implemented by license amendment, an agency action that triggers a hearing opportunity by law. See AEA § 189(a), 42 U.S.C. § 2239(a). This is true not only when the LTP is initially approved and made part of the license by license amendment *with such conditions and limitations as deemed appropriate and necessary* (see 50.82(a)(10)), but also later if new developments require a license amendment to approve modifications to the LTP that cannot be considered within the scope of the original amendment approving the LTP.

required assurance that the radiation protection standards of 10 C.F.R. Part 20 will be satisfied. In admitting this combined contention, the Board rejected Yankee's line of argument — that site characterization is an ongoing process — on the same grounds as it had rejected similar assertions regarding CAN's Contention 2. The Board likewise found CAN's third and fourth contentions sufficiently specific in that they "squarely present[ed] the same issue that was raised by the second contention: namely, whether the LTP had to contain a full site characterization, combined with any plans for remediation that might be required as a result of the characterization."<sup>47</sup>

As explained above, we do not fully agree with either the Board's or Yankee's interpretation of the pertinent requirements. The purpose of site characterization is to define relevant features of the soil, water, and buildings in order to assess risks and develop adequate plans to complete decommissioning. The LTP must deal with the correct issues — those already identified and those reasonably anticipated. The key question at the LTP submission stage is whether the site characterization is sufficiently detailed to allow evaluation of the adequacy of each element prescribed by 10 C.F.R. § 50.82(a)(9) and for making the findings required for approval of the LTP (*see* 10 C.F.R. § 50.82(a)(10)).

Turning to our consideration of the admissibility of CAN's contentions, we find that we do not have grounds to vacate the Board's decision. It appears that at least a portion of CAN's Contention 2 related to Yankee's alleged failure to include a remediation plan that adequately addresses tritium contamination would be admissible. The Commission has previously held that if an application contains disputed information or omits required information, petitioners normally must specify the portions of the application that are in dispute or incomplete.<sup>48</sup> In this case, the Petitioner has alleged that Yankee has omitted from its LTP application a remediation plan that addresses tritium contamination present at the site, and that Yankee's site characterization is inadequate to support any necessary remediation of this tritium. We find that the Board had a sufficient basis to find that Petitioner had made the showing required to indicate an inquiry in depth was warranted and admit such a contention, even though this may have been a close question.

Having said this, we recognize that this case may have become somewhat overtaken by events. New developments, in the form of a revised LTP submittal from Yankee and the Staff's completion of an environmental assessment, have

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<sup>47</sup> *See* LBP-04-27, 60 NRC at 546.

<sup>48</sup> *See Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), CLI-93-16, 38 NRC 25, 41 (1993).

come to our attention.<sup>49</sup> Add to this the clarification of applicable regulatory requirements we have articulated in this Order, and it seems clear that these issues will require consideration and may alter the course of this proceeding as it moves forward. As a result of these developments, the Board may be faced with summary disposition motions.

We are also mindful that the NRC Staff has raised the issue of whether the Board treated in too dismissive a manner certain Staff arguments related to the criteria for contention admission. We note that the Board in LBP-04-27 considered the Staff's procedural opposition to CAN's contentions "hyper-technical" and thus summarily rejected it.<sup>50</sup> We agree with the Staff that 10 C.F.R. § 2.309(f) is strict by design and should be rigorously followed by our adjudicatory bodies. In light of the allegedly material omission in the application and the uncertainties in the Applicant's rationale, we cannot say that the Board abused its obligation to examine the contention in light of the requirements of 10 C.F.R. § 2.309(f). We would strongly caution that with regard to future contentions associated with an LTP, the Board should consider our clarification of LTP requirements in this decision and ensure that proponents of a contention demonstrate that it is within the scope of the proceeding, has an adequate basis supported by facts or opinion, and raises a genuine dispute regarding an issue material to the findings the NRC must make prior to approval of the LTP.

### III. CONCLUSION

The Commission *affirms* LBP-04-27 and directs the Board to proceed consistent with this decision.

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<sup>49</sup> On November 19, 2004, Yankee submitted a formal revision to its LTP, "Submittal of Revision 1 of Yankee Nuclear Power Station's License Termination." In addition, on June 7, 2005, the Staff advised the Board of its Environmental Assessment and Finding of No Significant Impact Related to License Termination Plan for the Yankee Atomic Electric Co., License DPR-003, Rowe, Massachusetts, as published in the *Federal Register* on June 3, 2005.

<sup>50</sup> See LBP-04-27, 60 NRC at 546. For instance, the Staff challenged aspects of the second contention regarding the alleged failure of the LTP to demonstrate the cause and source of the tritium contamination, on grounds that such a showing was not required by section 50.82 and CAN had not demonstrated that the issue was material to the findings the NRC must make to support the action (see § 50.82(a)(10)). *Id.* at 545 n.4; see also NRC Staff Response to CAN's Request for Hearing and Proposed Contentions at 10-11 (Sept. 20, 2004).



IT IS SO ORDERED.

For the Commission<sup>51</sup>

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 29th day of June 2005.

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<sup>51</sup> Commissioner Jaczko was not present when this item was affirmed. Accordingly the formal vote of the Commission was 4-0 in favor of the decision. Commissioner Jaczko, 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. Paul B. Abramson**  
**Dr. Charles N. Kelber**

**In the Matter of**

**Docket No. 70-3103-ML**  
**(ASLBP No. 04-826-01-ML)**

**LOUISIANA ENERGY SERVICES, L.P.**  
**(National Enrichment Facility)**

**June 8, 2005**

In this 10 C.F.R. Part 70 proceeding regarding the application of Louisiana Energy Services, L.P. (LES), for authorization to possess and use source, byproduct, and special nuclear material to enrich natural uranium by the gas centrifuge process at its planned National Enrichment Facility (NEF) to be built near Eunice, New Mexico, the Licensing Board rules in favor of LES and the NRC Staff regarding four National Environmental Policy Act (NEPA)-related contentions submitted by Joint Intervenors Nuclear Information and Resource Service and Public Citizen (NIRS/PC) challenging various aspects of the environmental report (ER) that accompanied the LES application and/or the NRC Staff's draft environmental impact statement (EIS).

**RULES OF PRACTICE: TIMING OF HEARINGS**  
**(ENVIRONMENTAL ISSUES); REOPENING OF AN**  
**EVIDENTIARY RECORD**

Although 10 C.F.R. § 2.332(d) suggests that an evidentiary hearing regarding environmental issues should not go forward until the final EIS has been issued, with all the parties, including the Staff, in agreement, the hearing on admitted

environmental contentions was conducted following issuance of the Staff's draft EIS. While the Licensing Board's Partial Initial Decision is not necessarily dispositive of any subsequently filed contention/amended contention request regarding the Staff's final EIS, such a motion made in connection with the matters raised in the contentions addressed in the Decision would necessarily also require a showing to support reopening the record. *See id.* § 2.326.

#### **NEPA: CEQ REGULATIONS**

Regulations promulgated by the Council on Environmental Quality (CEQ) to provide agency guidance on NEPA compliance are not binding on the NRC when the agency has not expressly adopted them, but they are entitled to considerable deference. *See Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 725, 743 (3d Cir. 1989).

#### **NEPA: ENVIRONMENTAL ANALYSIS (HARD LOOK); RULE OF REASON**

NEPA requires generally that federal agencies consider the environmental impacts of their proposed actions, and take these considerations into account in their decisionmaking process. In other words, NEPA imposes procedural restraints, calling for an agency to take a "hard look" at the environmental impacts of a proposed action, as well as reasonable alternatives to that action. *See Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998). This "hard look" is, however, subject to a "rule of reason" in that the consideration of environmental impacts need not address every impact that could possibly result, but rather only those that are reasonably foreseeable or have some likelihood of occurring. *See, e.g., Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-156, 6 AEC 831, 836 (1973).

#### **NEPA: REMOTE AND SPECULATIVE EVENT; SCOPE OF ENVIRONMENTAL ANALYSIS**

Agencies are given broad discretion in determining how thoroughly to analyze a particular subject, *see Claiborne*, CLI-98-3, 47 NRC at 103, and may decline to examine issues the agency in good faith considers "remote and speculative" or "inconsequentially small," *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 44 (1989) (citing *Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 739 (3d Cir. 1989)).

**NEPA: SCOPE OF ENVIRONMENTAL ANALYSIS (PREFERENCES OF PRIVATE APPLICANT)**

When reviewing a license application filed by a private applicant, as opposed to a federally sponsored project, an agency may give substantial weight to the stated preferences of the applicant with regard to issues such as site selection and facility design. *See Claiborne*, CLI-98-3, 47 NRC at 104; *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho NM 87174), CLI-01-4, 53 NRC 31, 55 (2001).

**NEPA: SCOPE OF ENVIRONMENTAL ANALYSIS (DIRECT AND INDIRECT EFFECTS)**

The CEQ regulations state that an agency EIS must address both direct and indirect effects of an action. *See* 40 C.F.R. §§ 1502.16, 1508.8. Direct effects are those caused by the federal action, and occurring at the same time and place as that action, while indirect effects are caused by the action at a later time or more distant place, yet are still reasonably foreseeable. *See* 10 C.F.R. § 1508.8. But if effects are remote or speculative, the EIS need not discuss them. *See Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 551 (1978).

**NEPA: SCOPE OF ENVIRONMENTAL ANALYSIS (ROLE OF LICENSING BOARD)**

In connection with any admitted NEPA contentions, the Licensing Board's role in the NEPA analysis is similar to that of a federal court, in that the Board's job is "to ensure that the agency has adequately considered and disclosed the environmental impact of its actions . . . ." *See Coalition on Sensible Transportation, Inc. v. Dole*, 826 F.2d 60, 66 (D.C. Cir. 1987) (citation omitted).

**NEPA: ENVIRONMENTAL ANALYSIS (HARD LOOK)**

Because a principal goal of an EIS is to force an agency to take a "hard look" at the environmental consequences of a proposed project, the EIS must reflect such consideration by providing a reasoned discussion of the relevant issues. *See Tongass Conservation Society v. Cheney*, 924 F.2d 1137, 1140 (D.C. Cir. 1991).

**NEPA: ENVIRONMENTAL IMPACT STATEMENT (LICENSING BOARD DECISION AS AMENDMENT)**

In the context of an NRC adjudicatory proceeding, even if an EIS prepared by the Staff is found inadequate in certain respects, the ultimate NEPA judgments

regarding a facility can be made on the basis of the entire record before a presiding officer, such that the EIS can be deemed to be amended pro tanto. *See Allied-General Nuclear Services* (Barnwell Nuclear Fuel Plant Separations Facility), ALAB-296, 2 NRC 671, 680 (1975); *see also Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-03-30, 58 NRC 454, 473-74 (2003).

#### **NEPA: ENVIRONMENTAL REPORT**

The NRC's 10 C.F.R. Part 51 regulations require an applicant for a 10 C.F.R. Part 70 license for a uranium enrichment facility to file an ER with its application. *See* 10 C.F.R. §§ 51.20, 51.50. 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). The ER must also discuss (1) the impact of the proposed action on the environment; (2) any unavoidable adverse environmental impacts of the action; (3) alternatives to the proposed action; (4) the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity; and (5) any irreversible and irretrievable commitment of resources involved in the proposed action, if implemented. *Id.* § 51.45(b)(1)-(5).

#### **NEPA: ENVIRONMENTAL IMPACT STATEMENT (RELIANCE ON ENVIRONMENTAL REPORT)**

The Part 51 regulations require the Staff to review the ER and prepare a draft EIS, *id.* § 51.20(b)(10), in which the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives for reducing or avoiding adverse environmental impacts must be considered and weighed. *Id.* § 51.71(d). Though the draft EIS may rely in part on the ER, the regulations require the Staff to "independently evaluate and be responsible for the reliability of all information used in the [draft EIS]." *Id.* § 51.70(b).

#### **NEPA: ENVIRONMENTAL IMPACT STATEMENT (TIERING; INCORPORATION BY REFERENCE)**

It is within the agency's discretion to rely on an EIS, draft or otherwise, prepared by another federal agency if such reliance will aid in the presentation of issues, eliminate repetition, or reduce the length of an EIS. *Id.* Part 51, App. A, § 1(b). This "tiering" or "incorporation by reference" allows the Staff to adopt the underlying scientific data and inferences from the analysis conducted by the other agency without independent review, so long as it exercises independent

judgment with respect to conclusions about the environmental impacts relative to the current proposed agency action. *See Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), LBP-82-43A, 15 NRC 1423, 1467-68 (1982).

**RULES OF PRACTICE: CONTENTIONS (CONTENTIONS OF OMISSION)**

When a contention focuses on the Staff's purported failure to provide an explanation relative to certain calculations, that contention asserts a contention of omission which, upon cure, becomes moot. *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, 383 (2002) (clarifying CLI-02-17, 56 NRC 1 (2002)).

**REGULATIONS: INTERPRETATION (10 C.F.R. § 70.64(b))**

Because there is no perfect (100% probability) engineered system, the NRC has adopted its "defense-in-depth" approach, which requires a series of engineered barriers to protect against radiation exposures to the public and the environment. *See* 10 C.F.R. § 70.64(b).

**NEPA: AGENCY RESPONSIBILITIES (GROUNDWATER MONITORING) JURISDICTION (STATE REGULATORY AUTHORITY)**

If monitoring of contaminants discharged at a facility is regulated through a state groundwater discharge permit, a licensing board need not address an argument that the levels of detection and control of contamination are insufficient because this is a matter outside the board's purview. While the Staff must address in its EIS the monitoring of effluent contaminants, compliance with state requirements is, in the first instance, a matter for the state. *See Consolidated Edison Co. of New York* (Indian Point, Unit 2), ALAB-453, 7 NRC 31, 34 (1978).

**NEPA: AGENCY RESPONSIBILITIES (INDEPENDENT NEPA ANALYSIS)**

The Staff is required to perform its own independent NEPA analysis and, although it may glean information from the applicant's ER, the ultimate responsibility for NEPA compliance rests with the Staff.

**NEPA: SCOPE OF ENVIRONMENTAL ANALYSIS (NEED FOR FACILITY)**

Under NEPA, in seeking to address the need for its proposed enrichment facility, an applicant is not required to present a business plan, to make its “business case,” or to demonstrate the profitability of its proposed facility, nor is it under any obligation to provide a detailed market analysis. Thus, the Licensing Board’s NEPA inquiry need not address any matters associated with the projected cost of supplying enrichment services, or the potential prices that might be paid for those services. Rather, the Board’s inquiry should focus upon the projected demand (based on current operating and anticipated new reactors) and the expected supply based upon the actual commitments or statements of the parties involved in supply production.

**NEPA: SCOPE OF ENVIRONMENTAL ANALYSIS (NEED FOR FACILITY)**

In the context of projecting market supply and demand, the relevant inquiry under NEPA is not whether the assumptions made are perfect or unchallengeable, but whether they are reasonable. *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); *see also Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), ALAB-490, 8 NRC 234, 237, 241 (1978).

**TECHNICAL ISSUE(S) DISCUSSED**

The following technical issues are discussed: ground and surface water contamination impacts, water supply impacts, and waste storage impacts.

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**FIRST PARTIAL INITIAL DECISION  
(Environmental Contentions)**

**I. INTRODUCTION**

1.1 On December 12, 2003, Louisiana Energy Services, L.P. (LES), filed an application with the NRC seeking authority to construct and operate a uranium enrichment facility — designated the National Enrichment Facility (NEF) — near Eunice, New Mexico. This First Partial Initial Decision presents the Licensing



Board's findings of fact and conclusions of law relative to several admitted environmental contentions (ECs) jointly proffered by Intervenors Nuclear Information and Resource Service and Public Citizen (NIRS/PC) — NIRS/PC EC-1, Impacts upon Ground and Surface Water; NIRS/PC EC-2, Impact upon Water Supplies; NIRS/PC EC-4, Impacts of Waste Storage; and NIRS/PC EC-7, Need for the Facility — challenging the adequacy of either or both the Environmental Report (ER) contained in the NEF application or the Draft Environmental Impact Statement (DEIS) prepared by the NRC Staff.

1.2 For the reasons set forth below, the Board finds that, in the face of the NIRS/PC challenges to the ER and DEIS as reflected in contentions NIRS/PC EC-1, NIRS/PC EC-2, NIRS/PC EC-4, and NIRS/PC EC-7, the Staff and/or LES have carried their respective burdens of proof to demonstrate the adequacy of the ER and/or DEIS in accordance with 10 C.F.R. §§ 51.20, 51.45, 51.71. Thus, the Board concludes that the NIRS/PC claims in those contentions regarding the sufficiency of the ER and/or DEIS cannot be sustained.

## II. PROCEDURAL BACKGROUND

2.1 Following the December 2003 submission by LES of its application for a 30-year 10 C.F.R. Part 70 license to operate the proposed NEF, the Commission issued a January 30, 2004 notice of hearing and opportunity to intervene in the LES application, which was subsequently published in the *Federal Register*. See CLI-04-3, 59 NRC 10 (2004) (69 Fed. Reg. 5873 (Feb. 6, 2004)). Several entities responded by filing petitions asking to be admitted as a party to the proceeding on the application. On March 23, April 5, and April 6, 2004, respectively, the New Mexico Environment Department (NMED), the Attorney General of New Mexico (AGNM), and NIRS/PC each submitted petitions to intervene pursuant to 10 C.F.R. § 2.309(a). See [NMED] Request for Hearing and Petition for Leave To Intervene (Mar. 23, 2004); [AGNM] Request for Hearing and Petition for Leave To Intervene (Apr. 5, 2004); Petition To Intervene by [NIRS/PC] (Apr. 6, 2004).

2.2 In response to these intervention requests, on April 15, 2004, this Licensing Board was constituted to preside over the LES adjudicatory proceeding. See 69 Fed. Reg. 22,100 (Apr. 23, 2004). That same day, the Board issued an initial prehearing order that, among other things, directed the Petitioners to supplement their initial intervention petitions by categorizing the already-submitted contentions within at least one of three groups: (1) technical contentions (TC) relating primarily to the application's Safety Analysis Report (SAR); (2) environmental contentions relating primarily to the ER; or (3) miscellaneous contentions (MC) that did not fall into either of these two groups. See Licensing Board Memorandum and Order (Initial Prehearing Order) (Apr. 15, 2004) at 2-3 (unpublished).

2.3 In the interim, the Commission issued an order ruling on the standing of each Petitioner, a matter the Commission previously had reserved to itself. *See* CLI-04-3, 59 NRC at 13; LBP-04-14, 60 NRC 40, 53-54 (2004). The Commission determined that, as state representatives, NMED and the AGNM need not demonstrate standing to intervene, and that NIRS/PC had demonstrated the requisite standing to intervene in the proceeding, *see* LBP-04-14, 60 NRC at 53-54, and accordingly referred the three petitions to the Board. *See* CLI-04-15, 59 NRC 256, 256-57 (2004).

2.4 NIRS/PC filed its supplement to its intervention petition on May 27, 2004, designating certain of its contentions as environmental, and certain others as both environmental and technical. *See* Supplement to Petition To Intervene on Behalf of [NIRS/PC] (May 27, 2004) [hereinafter NIRS/PC Petition Supplement]. The Board issued an order the following day setting the schedule for the initial prehearing conference at which time the Petitioners, LES, and the Staff would make arguments regarding the admissibility of proffered contentions. *See* Licensing Board Memorandum and Order (Initial Prehearing Conference Schedule; Opportunity for Written Limited Appearance Statements) (May 28, 2004) (unpublished) [hereinafter Prehearing Conference Scheduling Order]. This order also renumbered and designated certain contentions as environmental or environmental/technical contentions. *See id.* at 2-5.

2.5 In their original forms as set forth in the NIRS/PC intervention petition, and as further characterized by the NIRS/PC supplement and the Board's prehearing conference scheduling order, *see* NIRS/PC Petition Supplement at 1-5; Prehearing Conference Scheduling Order at 2-5, the NIRS/PC environmental contentions provided:

NIRS/PC EC-1 — IMPACTS UPON GROUND AND SURFACE WATER

CONTENTION: Petitioners contend that the Environmental Report ("ER") 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 C.F.R. 51.45.

NIRS/PC EC-2 — IMPACT UPON WATER SUPPLIES

CONTENTION: Petitioners contend that the ER contained in the application does not contain a complete or adequate assessment of the potential environmental impacts of the proposed project upon water supplies in the area of the project, contrary to 10 C.F.R. 51.45.

To introduce a new industrial facility with significant water needs in an area with a projected water shortage runs counter to the federal responsibility to act "as a trustee of the environment for succeeding generations," according to the National Environmental Policy Act (NEPA) § 101(b)(1) and 55 U.S.C. § 4331(b)(1). To

present a full statement of the costs and benefits of the proposed facility the ER should set forth the impacts of the NEF on groundwater supplies.

NIRS/PC EC-4 — IMPACTS OF WASTE STORAGE AND DISPOSAL

CONTENTION: Petitioners contend that the LES ER lacks adequate information to make an informed licensing judgment, contrary to the requirements of 10 C.F.R. Part 51. The ER fails to discuss the impacts of construction and operation of deconversion and disposal facilities that are required in conjunction with the proposed enrichment plant.

NIRS/PC EC-7/TC-4 — NEED FOR THE FACILITY

CONTENTION: Petitioners contend that the Environmental Report (“ER”) does not adequately describe or weigh the environmental, social, and economic impacts and costs of operating the National Enrichment Facility (“NEF”) (*See* ER 1.1.1 et seq.).

LBP-04-14, 60 NRC at 66-70.

2.6 In accordance with the prehearing conference scheduling order, the Board conducted a 1-day prehearing conference on June 15, 2004, in Hobbs, New Mexico, during which the Petitioners, LES, and the Staff made oral presentations regarding the admissibility of each contention submitted by NMED, the AGNM, and NIRS/PC, including the four environmental contentions at issue here. *See id.* at 52.

2.7 In a July 19, 2004 memorandum and order, the Board ruled on the admissibility of each of the contentions set forth by NMED, the AGNM, and NIRS/PC, and found that only NIRS/PC had advanced admissible environmental contentions. *See id.* at 59-71. Specifically, the Board held that NIRS/PC EC-1 and NIRS/PC EC-2 were each admitted as supported by bases sufficient to raise genuine issues of material fact adequate to warrant further inquiry. *See id.* at 66-67. NIRS/PC EC-4 was admitted to the extent that its bases challenged the ER as failing to evaluate environmental effects of the construction and operation of the NEF, which was sufficient to establish a genuine material dispute adequate to warrant further inquiry. *See id.* at 68.

2.8 Finally, the Board admitted NIRS/PC EC-7/TC-4 to the extent that certain bases were sufficient to establish a genuine material dispute with the ER adequate to warrant further inquiry. To the extent that this contention challenged the failure of LES to demonstrate profitability of the proposed NEF or to otherwise present a “business case,” the Board found it inadmissible. Therefore, contention NIRS/PC EC-7/TC-4 was admitted as an environmental contention only. *See id.* at 69-70. Given the Commission’s May 20, 2004 finding that NIRS/PC had standing to intervene, *see id.* at 50, and the Board’s finding that NIRS/PC had

proffered at least one admissible contention, NIRS/PC was admitted as a party to the proceeding. *See id.* at 48.

2.9 To reflect these admissibility rulings, the Board set forth in Appendix A to its July 19 memorandum and order revised versions of contentions NIRS/PC EC-4 and EC-7/TC-4 that read:

NIRS/PC EC-4 — IMPACTS OF WASTE STORAGE AND DISPOSAL

CONTENTION: Petitioners contend that the Louisiana Energy Services, L.P. Environmental Report (ER) lacks adequate information to make an informed licensing judgment, contrary to the requirements of 10 C.F.R. Part 51. The ER fails to discuss the environmental impacts of construction and lifetime operation of a conversion plant for the Depleted Uranium Hexafluoride (“UF<sub>6</sub>”) waste that is required in conjunction with the proposed enrichment plant.

NIRS/PC EC-7/TC-4 — NEED FOR THE FACILITY

CONTENTION: Petitioners contend that the Environmental Report (ER) does not adequately describe or weigh the environmental, social, and economic impacts and costs of operating the National Enrichment Facility (*See* ER 1.1.1 et seq.) in that:

- (A) Louisiana Energy Services, L.P.’s (LES) presentation erroneously assumes that there is a shortage of enrichment capacity.
- (B) LES’s statements of “need” for the LES plant (ER 1.1) depend primarily upon global projections of need rather than projections of need for enrichment services in the U.S.
- (C) LES has referred to supply and demand in the uranium enrichment market (ER 1.1), but it has not shown how LES would effectively enter this market in the face of existing and anticipated competitors and contribute some public benefit.

*Id.* at 78, 80. Contentions NIRS/PC EC-1 and EC-2 were admitted without modification and as set forth in paragraph 2.5 above.

2.10 Thereafter, by memorandum and order dated August 16, 2004, the Board set forth a general schedule for this proceeding. As is relevant here, that schedule set an October 20, 2004 deadline for submitting late-filed environmental contentions or amendments and/or supplements to previously admitted environmental contentions. *See* Licensing Board Memorandum and Order (Memorializing and Ruling on Matters Raised in Conjunction with August 3, 2004 Conference Call and Setting General Schedule for Proceeding) (Aug. 16, 2004), App. A (unpublished). In accordance with this schedule, on October 20, NIRS/PC submitted a motion to amend and/or supplement several previously admitted contentions based on the September 2004 issuance of the Staff’s DEIS with regard to the

NEF, as well as information revealed during the discovery process.<sup>1</sup> *See* Motion on Behalf of [NIRS/PC] To Amend and Supplement Contentions (Oct. 20, 2004).

2.11 As set forth in their late-filing motion, NIRS/PC sought to amend the relevant environmental contentions as follows (new material appears in **bold**):

NIRS/PC EC-1 — IMPACTS UPON GROUND AND SURFACE WATER

CONTENTION: Petitioners contend that the Environmental Report 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 C.F.R. 51.45.

**The Draft Environmental Impact Statement, NUREG-1790 (September 2004) (“DEIS”) 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 C.F.R. Part 51.**

NIRS/PC EC-2 — IMPACT UPON WATER SUPPLIES

CONTENTION: Petitioners contend that the Environmental Report (ER) contained in the application does not contain a complete or adequate assessment of the potential environmental impacts of the proposed project upon water supplies in the area of the project, contrary to 10 C.F.R. 51.45.

To introduce a new industrial facility with significant water needs in an area with a projected water shortage runs counter to the federal responsibility to act “as a trustee of the environment for succeeding generations,” according to the National Environmental Policy Act § 101(b)(1) and 55 U.S.C. § 4331(b)(1). To present a full statement of the costs and benefits of the proposed facility the ER should set forth the impacts of the National Enrichment Facility on groundwater supplies.

**The water used at the proposed facility would be pumped from the Hobbs well field (Lea County Underground Water Basin, Ogallala Aquifer) (ER Rev. 2 at 4.4-5). Groundwater in the Basin is being pumped at a rate faster than it is being recharged (Lea County Regional Water Plan, prepared for Lea County Water Users Association, Summary at 1; at 5-4). The DEIS compares the water use of the proposed facility to the amount of water stored in the Ogallala Aquifer in the entire State of New Mexico (DEIS at 4-15). However, NRC has**

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<sup>1</sup> Although section 2.332(d) of the recently amended agency Rules of Practice suggests that an evidentiary hearing regarding environmental issues should not go forward until the final EIS has been issued, in this instance all the parties involved in such issues, including the Staff, agreed to go forward on the admitted environmental contentions following issuance of the Staff’s draft EIS. While our ruling today is not necessarily dispositive of any subsequently filed contention/amended contention request regarding the Staff’s final EIS, such a motion made in connection with the matters raised in the four NIRS/PC contentions that are addressed in this Decision would necessarily also require a showing to support reopening the record. *See* 10 C.F.R. § 2.326.

**not shown in the DEIS how this pumpage would affect water levels and the long-term productivity of the Hobbs well field or the Lea County Underground Water Basin.**

NIRS/PC EC-4 — IMPACTS OF WASTE STORAGE AND DISPOSAL

CONTENTION: Petitioners contend that the Louisiana Energy Services, L.P. Environmental Report (ER) lacks adequate information to make an informed licensing judgement, contrary to the requirements of 10 C.F.R. Part 51. The ER fails to discuss the environmental impacts of construction and lifetime operation of a conversion plant for the Depleted Uranium Hexafluoride (“UF<sub>6</sub>”) waste that is required in conjunction with the proposed enrichment plant.

**The DEIS fails to discuss the environmental impacts of the construction and operation of a conversion plant for the depleted uranium hexafluoride waste. The DEIS entirely relies upon final EISs issued in connection with the construction of two conversion plants at Paducah, Kentucky, and Portsmouth, Ohio, that will convert the Department of Energy’s [(DOE)] inventory of depleted uranium (DEIS at 2-28, 2-30, 4-53, 4-54). Such reliance is erroneous, because the DOE plants are unlike the private conversion plant contemplated by LES.**

**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.**

NIRS/PC EC-7 — NEED FOR THE FACILITY

CONTENTION: Petitioners contend that the Environmental Report (ER) does not adequately describe or weigh the environmental, social, and economic impacts and costs of operating the National Enrichment Facility (*See* ER 1.1.1 et seq.).

**The DEIS likewise omits to discuss the impact of the proposed NEF, in particular upon the market for enrichment services, by failing to consider the effect of the addition of the NEF to the existing range of suppliers and other forthcoming suppliers, the nature of competition that will occur, and the impacts upon market participants and consumers.**

*See* Licensing Board Memorandum and Order (Ruling on Late-Filed Contentions) (Nov. 22, 2004) at 8, 10, 14, 17 (unpublished) [hereinafter November Late-Filing Ruling].

2.12 The Board ruled on the admissibility of these and other late-filed contentions in a November 22, 2004 memorandum and order. In so doing, as to each contention the Board ruled on both the question of whether a balancing of

the late-filing criteria set forth in 10 C.F.R. § 2.309(c) barred the contention's admissibility, and whether the contention met the general admissibility requirements of 10 C.F.R. § 2.309(f). *See* November Late-Filing Ruling. As to EC-1, the Board found it admissible as supported by Bases C, D, F, G, and I, each of which met both the late-filing criteria and the general admissibility requirements. Basis B was precluded by its late-filing, and the remaining Bases A, E, and H were inadmissible in that they lacked sufficient factual support or expert opinion and/or failed to raise a genuine material dispute with the DEIS. *See id.* at 8-10. To clarify the scope of this contention and highlight the particular ways in which NIRS/PC challenged the DEIS as incomplete or inadequate, the Board revised EC-1 to include several new paragraphs denominated (A) through (E), each representing the support given to the contention amendment by a particular basis. *See id.*, App. A at 1-2.

2.13 The proffered amendment to EC-2 was also admitted in part, in that the last two sentences were supported by bases sufficient to raise genuine issues of material fact adequate to warrant further inquiry. The first two sentences were found to be inadmissible in that they were precluded by their late-filing. *See id.* at 11. As to EC-4, the Board declined to admit proposed paragraph 3 in that it concerned an issue awaiting review by the Commission, but admitted paragraph 2 to the extent it was supported by Basis A. Basis B did not support admission of the amendment in that it raised the issue of economic cost that the Board previously had held was outside the scope of this contention. To further clarify the scope of this contention, the Board modified the title of EC-4 to delete the words "and Disposal." *See id.* at 14-15. Finally, as to EC-7, the Board found the amendment inadmissible in that it also sought to discuss economic issues outside the scope of the contention. *See id.* at 17-18.

2.14 To reflect these rulings on the late-filed contentions, the Board set forth revised versions of the modified contentions that read:

#### NIRS/PC EC-1 — IMPACTS UPON GROUND AND SURFACE WATER

CONTENTION: Petitioners contend that the Environmental Report 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 C.F.R. 51.45.

The Draft Environmental Impact Statement, NUREG-1790 (September 2004) ("DEIS") likewise 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 C.F.R. Part 51 in that:

- (A) The DEIS correctly notes that leakage from the stormwater detention basin and the septic leach fields will probably cause formation of perched bodies of groundwater at the alluvium/Chinle interface. (DEIS, 4-13, 4-14). The

DEIS contains estimates of the dimensions of such water bodies, flow rates, and discharge areas. However, NRC provides no explanation of such calculations, and it is not possible to determine whether they are reasonable.

- (B) The DEIS does not contain an estimate of the probability and frequency of leakage through the liners of the treated effluent basin or the stormwater detention basin. The basins are to be lined with geosynthetic materials (DEIS at 4-11, 4-12), such liners are known to leak (EPA, Hydrologic Evaluation of Landfill Performance (HELP) Model, User's Guide for Version 3, EPA/600/R-94/168a, Sept. 1994), and such information is necessary to demonstrate the impact of such leakage. The DEIS should contain an estimate of the leakage rate and should show the fate of water and contaminants that leak from the basins.
- (C) According to the DEIS, “. . . no precipitation recharge (i.e., rainfall seeping deeply into the ground) occurs in thick, desert vadose zones with desert vegetation (Walvoord et al., 2002)” (DEIS at 3-35). However, cuttings from one of the borings drilled in September 2003 were “slightly moist” (ER Rev. 2 at 3.4-2). In addition, the clay at the bottom of boring B-2 was “moist” (SAR at Fig. 3.2-11). The DEIS should explain the presence of this moisture, which conflicts with its statements about lack of recharge.
- (D) The DEIS states: “Although the presence of fracture zones that can significantly increase vertical water transport through the Chinle Formation has not been precluded, the low measured permeabilities indicate the absence of such zones.” (DEIS at 3-35). Two permeability measurements have been made on the Chinle Formation at or near the site: laboratory measurement of core samples (ER Rev. 2 Table 3.3-2) and a slug test performed in MW-2 (Cook-Joyce, Hydrogeologic Investigation, Sec. 32, T. 21 R. 38, Nov. 19, 2003). Such extremely limited measurements, where faults are present, cannot describe the permeability of the entire site, and NRC should explain its reliance on such restricted data.
- (E) The stormwater basin will discharge runoff containing numerous contaminants, which are not adequately identified in the DEIS, nor is their monitoring explained. LES has stated that the runoff will contain small amounts of oil and grease typically found in runoff from paved roadways and parking areas (RAI Response, May 20, 2004, at 33). However, other contaminants may be present, such as PAHs (USGS, Concentrations of PAHs and Major and Trace Elements in Simulated Rainfall Runoff from parking lots, 2003, Open File Report 2004-1208), other organics such as aliphatic hydrocarbons and alcohols (Barrett, M.E, et al., Review and Evaluation of Literature Pertaining to the Quality and Control of Pollution from Highway Runoff and Construction, Tech. Report CRWR 239, April 1993), and other contaminants from spills and accidents. Their presence



should be disclosed. Further, stormwater should be monitored for such contaminants.

#### NIRS/PC EC-2 — IMPACT UPON WATER SUPPLIES

**CONTENTION:** Petitioners contend that the Environmental Report (ER) contained in the application does not contain a complete or adequate assessment of the potential environmental impacts of the proposed project upon water supplies in the area of the project, contrary to 10 C.F.R. 51.45.

To introduce a new industrial facility with significant water needs in an area with a projected water shortage runs counter to the federal responsibility to act “as a trustee of the environment for succeeding generations,” according to the National Environmental Policy Act § 101(b)(1) and 55 U.S.C. § 4331(b)(1). To present a full statement of the costs and benefits of the proposed facility the ER should set forth the impacts of the National Enrichment Facility on groundwater supplies.

The DEIS does compare the water use of the proposed facility to the amount of water stored in the Ogallala Aquifer in the entire State of New Mexico (DEIS at 4-15). However, NRC has not shown in the DEIS how this pumpage would affect water levels and the long-term productivity of the Hobbs well field or the Lea County Underground Water Basin.

#### NIRS/PC EC-4 — IMPACTS OF WASTE STORAGE

**CONTENTION:** Petitioners contend that the Louisiana Energy Services, L.P. Environmental Report (ER) lacks adequate information to make an informed licensing judgement, contrary to the requirements of 10 C.F.R. Part 51. The ER fails to discuss the environmental impacts of construction and lifetime operation of a conversion plant for the Depleted Uranium Hexafluoride (“UF<sub>6</sub>”) waste that is required in conjunction with the proposed enrichment plant.

The DEIS fails to discuss the environmental impacts of the construction and operation of a conversion plant for the depleted uranium hexafluoride waste. The DEIS entirely relies upon final EISs issued in connection with the construction of two conversion plants at Paducah, Kentucky, and Portsmouth, Ohio, that will convert the Department of Energy’s inventory of depleted uranium (DEIS at 2-28, 2-30, 4-53, 4-54). Such reliance is erroneous, because the DOE plants are unlike the private conversion plant contemplated by LES.

*See* November Late-Filing Ruling, App. A. Contention NIRS/PC EC-7 remained unmodified, as set forth in paragraph 2.9 above.

2.15 Thereafter, in preparation for the evidentiary hearing on environmental contentions, NIRS/PC, LES, and the NRC Staff filed prefiled direct testimony with the Board on January 7, 2005. In response to the NIRS/PC prefiled direct testimony, LES and the Staff filed motions in limine seeking variously to disqualify certain NIRS/PC witnesses as experts and to strike portions of the

prefiled testimony of certain witnesses and associated exhibits. *See* Licensing Board Memorandum and Order (Ruling on in Limine Motions and Providing Administrative Directives) (Jan. 21, 2005) (unpublished) [hereinafter First in Limine Ruling]. The Board declined to disqualify any of the NIRS/PC witnesses, but ruled in favor of striking certain portions of the NIRS/PC prefiled direct testimony to the degree that testimony fell outside the scope of the contentions as admitted. *See id.*

2.16 On January 28, 2005, NIRS/PC, LES, and the Staff submitted prefiled rebuttal testimony as to each contention and, in addition, NIRS/PC filed revised versions of the prefiled direct testimony of its witnesses pursuant to the Board's January 21 in limine ruling. On February 1, 2005, LES again filed a motion in limine, this time with regard to NIRS/PC's rebuttal testimony, asking that the Board strike certain portions of that testimony as outside the scope of the contentions as admitted. *See* Licensing Board Memorandum and Order (Ruling on in Limine Motions Regarding Prefiled Direct and Rebuttal Testimony and Providing Administrative Directives) (Feb. 4, 2005) at 2-5 (unpublished). In addition, on February 3, 2005, NIRS/PC filed a motion in limine asking that the Board strike in its entirety the testimony of the Staff's witness with regard to contention EC-2 based on the Staff's alleged failure to serve that testimony on NIRS/PC. *See id.* at 5-6. The Board ruled on both motions in a February 4, 2005 memorandum and order, striking certain portions of the NIRS/PC rebuttal testimony as outside the scope of the relevant admitted contentions, but declining to strike the Staff's prefiled direct testimony as to EC-2, opting instead to allow the NIRS/PC witness to give "live" rebuttal testimony relative to the Staff's prefiled direct testimony at the evidentiary hearing. *See id.* at 6.

2.17 Finally, on February 4, 2005, the last business day before the scheduled evidentiary hearing, the NRC Staff filed a motion in limine seeking to exclude certain portions of the prefiled rebuttal testimony of the NIRS/PC witness regarding EC-4 as outside the scope of the contention. *See* NRC Staff's Motion in Limine To Exclude Portions of the Prefiled Rebuttal Testimony of NIRS/PC Witness Dr. Arjun Makhijani (Feb. 4, 2005). Because of the timing of this motion, the Board set no schedule for responses to the motion, but planned instead to hear any responses orally at the evidentiary hearing. LES nevertheless filed a response on February 6, 2005, essentially supporting the Staff's motion, *see* Response of [LES] to NRC Staff's Motion in Limine To Exclude Portions of the Prefiled Rebuttal Testimony of NIRS/PC Witness Dr. Arjun Makhijani (Feb. 6, 2005), while NIRS/PC responded orally at the evidentiary hearing. *See* Tr. at 1092-94. The Board granted the Staff's motion in part and denied it in part, striking those portions of the prefiled rebuttal testimony falling outside the scope of the admitted contention. *See* Tr. at 1095-96.

2.18 In accordance with the general schedule set forth in the Board's August 16 memorandum and order, on February 7-10, 2005, the Board held eviden-

tiary hearings in Hobbs, New Mexico, on environmental contentions EC-1, EC-2, EC-4, and EC-7, during which witnesses testified on behalf of NIRS/PC, LES, and the NRC Staff.<sup>2</sup> *See* Tr. at 340-1692.

2.19 Pursuant to 10 C.F.R. § 2.712 and the general schedule set forth in Appendix A to the Board's August 16 order, on March 14, 2005, NIRS/PC, LES, and the Staff filed with the Board proposed findings of fact and conclusions of law regarding those environmental contentions. *See* Proposed Findings of Fact and Conclusions of Law Based Upon Evidentiary Hearing Held on February 7 through 10, 2005 Submitted on Behalf of Intervenors [NIRS/PC] (Mar. 14, 2005); NRC Staff's Proposed Findings of Fact and Conclusions of Law Concerning NIRS/PC Contentions [EC-1], [EC-2], [EC-4], and [EC-7] (Mar. 14, 2005); [LES] Proposed Findings of Fact and Conclusions of Law Regarding Environmental Contentions (Mar. 14, 2005). Each party similarly filed reply findings of fact and conclusions of law on April 4, 2005. *See* Reply Proposed Findings of Fact and Conclusions of Law Based Upon Evidentiary Hearing Held on February 7 through 10, 2005 Submitted on Behalf of Intervenors [NIRS/PC] (Apr. 4, 2005) [hereinafter NIRS/PC Reply Findings]; [LES] Reply Findings of Fact and Conclusions of Law Regarding Environmental Contentions (Apr. 4, 2005); NRC Staff's Reply Findings of Fact and Conclusions of Law Concerning NIRS/PC Contentions [EC-1], [EC-2], [EC-4], and [EC-7] (Apr. 4, 2005). Meanwhile, in a March 22, 2005 order adopting certain corrections to the February 2005 hearing transcripts, the Board closed the evidentiary record as of that date. *See* Licensing Board Order (Adopting Transcript Corrections Regarding February 2005 Evidentiary Hearing and Closing Record) (Mar. 22, 2005) at 2 (unpublished).<sup>3</sup>

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<sup>2</sup> Additionally, in accord with 10 C.F.R. § 2.315(a), on the morning and afternoon of February 12, 2005, the Board conducted limited appearance sessions in Eunice, New Mexico, during which approximately three dozen members of the public provided comments regarding the proposed NEF.

<sup>3</sup> In a footnote to that March 22 order, the Board noted that on February 2, 2005, a few days prior to the evidentiary hearings on environmental contentions, NIRS/PC filed a second motion to amend certain previously admitted contentions, including contention EC-4. *See* Motion on Behalf of Intervenors [NIRS/PC] for Admission of Late-Filed Contentions (Feb. 2, 2005). LES and the Staff filed responses to the motion on March 3, 2005, each objecting on various grounds to the admission of any further amendment to EC-4. *See* Answer of [LES] to Motion on Behalf of [NIRS/PC] For Admission of Late-Filed Contentions (Mar. 3, 2005) at 6-7; NRC Staff Response to Motion on Behalf of Intervenors [NIRS/PC] for Admission of Late-Filed Contentions (Mar. 3, 2005) at 5-10. In a May 3, 2005 memorandum and order, the Board declined to allow any further amendment to EC-4, ruling that the proposed amendment failed to meet both the section 2.309(c) late-filing standards and the section 2.309(f) general admissibility requirements. *See* Licensing Board Memorandum and Order (Ruling on NIRS/PC Late-Filed Contentions and Providing Administrative Directives) (May 3, 2005) at 9-11 (unpublished). Therefore, the Board's ruling in the instant Decision represents its final determination regarding contention EC-4.

### III. APPLICABLE LEGAL STANDARDS

3.1 The environmental contentions at issue here — NIRS/PC EC-1, EC-2, EC-4, and EC-7 — arise under the National Environmental Policy Act (NEPA) and the NRC regulations implementing the agency's responsibilities pursuant to that Act. *See* 42 U.S.C. §§ 4321 *et seq.*; 10 C.F.R. Part 51. Together, this statute and the corresponding regulations require an applicant and the Staff to consider the potential environmental effects of the proposed action. In addition, the Council on Environmental Quality (CEQ) has implemented regulations that provide guidance on agency compliance with NEPA. *See* 40 C.F.R. Part 1500. While these regulations are not binding on the NRC when the agency has not expressly adopted them, they are entitled to considerable deference. *See Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 725, 743 (3rd Cir. 1989).

#### A. NEPA Requirements

3.2 NEPA requires generally that federal agencies consider the environmental impacts of their proposed actions, and take these considerations into account in their decisionmaking process. In other words, NEPA imposes procedural restraints, calling for an agency to take a “hard look” at the environmental impacts of a proposed action, as well as reasonable alternatives to that action. *See Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998). This “hard look” is, however, subject to a “rule of reason” in that the consideration of environmental impacts need not address every impact that could possibly result, but rather only those that are reasonably foreseeable or have some likelihood of occurring. *See, e.g., Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-156, 6 AEC 831, 836 (1973). Agencies are given broad discretion in determining how thoroughly to analyze a particular subject, *see Claiborne*, CLI-98-3, 47 NRC at 103, and may decline to examine issues the agency in good faith considers “remote and speculative” or “inconsequentially small,” *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 44 (1989) (citing *Limerick Ecology Action*, 869 F.2d at 739). To that end, when reviewing a license application filed by a private applicant, as opposed to a federally sponsored project, an agency may give substantial weight to the stated preferences of the applicant with regard to issues such as site selection and facility design. *See Claiborne*, CLI-98-3, 47 NRC at 104; *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho NM 87174), CLI-01-4, 53 NRC 31, 55 (2001).

3.3 Finally, the CEQ regulations state that an agency EIS must address both direct and indirect effects of an action. *See* 40 C.F.R. §§ 1502.16, 1508.8. Direct effects are those caused by the federal action, and occurring at the same time and place as that action, while indirect effects are caused by the action at a later time

or more distant place, yet are still reasonably foreseeable. *See* 10 C.F.R. § 1508.8. But if effects are remote or speculative, the EIS need not discuss them. *See Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 551 (1978).

3.4 In connection with any admitted NEPA contentions, the Licensing Board's role in the NEPA analysis is similar to that of a federal court, in that the Board's job is "to ensure that the agency has adequately considered and disclosed the environmental impact of its actions . . . ." *See Coalition on Sensible Transportation, Inc. v. Dole*, 826 F.2d 60, 66 (D.C. Cir. 1987) (citation omitted). And in this regard, recognizing that because a principal goal of an EIS is to force an agency to take a "hard look" at the environmental consequences of a proposed project, the EIS must reflect such consideration by providing a reasoned discussion of the relevant issues. *See Tongass Conservation Society v. Cheney*, 924 F.2d 1137, 1140 (D.C. Cir. 1991). In the context of an NRC adjudicatory proceeding, however, even if an EIS prepared by the Staff is found to be inadequate in certain respects, the ultimate NEPA judgments regarding a facility can be made on the basis of the entire record before a presiding officer, such that the EIS can be deemed to be amended pro tanto. *See Allied-General Nuclear Services (Barnwell Nuclear Fuel Plant Separations Facility)*, ALAB-296, 2 NRC 671, 680 (1975); *see also Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation)*, LBP-03-30, 58 NRC 454, 473-74 (2003).

## **B. 10 C.F.R. Part 51 Requirements**

3.5 The NRC's Part 51 regulations require an applicant for a 10 C.F.R. Part 70 license for a uranium enrichment facility to file an Environmental Report with its application. *See* 10 C.F.R. §§ 51.20, 51.50. 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). The ER must also discuss (1) the impact of the proposed action on the environment; (2) any unavoidable adverse environmental impacts of the action; (3) alternatives to the proposed action; (4) the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity; and (5) any irreversible and irretrievable commitment of resources involved in the proposed action, if implemented. *Id.* § 51.45(b)(1)-(5).

3.6 In addition, the regulations require the NRC Staff to review the ER and prepare a draft environmental impact statement, *id.* § 51.20(b)(10), in which the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives for reducing or avoiding adverse environmental impacts must be considered and weighed. *Id.* § 51.71(d). Though the DEIS may rely in part on the ER, the regulations require the Staff to "independently evaluate and be responsible for the reliability of all information

used in the [DEIS].’ *Id.* § 51.70(b). The DEIS is then distributed for public comment, and based on the comments received, a review of information provided by the applicant, and supplemental independent information and analysis, the Staff prepares and issues a final environmental impact statement (FEIS). *Id.* §§ 51.73, 51.91.

3.7 As noted above, the Staff is generally required to independently evaluate and substantiate all information contained in the DEIS. It is, however, within the agency’s discretion to rely on an EIS, draft or otherwise, prepared by another federal agency if such reliance will aid in the presentation of issues, eliminate repetition, or reduce the length of an EIS. *Id.* Part 51, App. A, § 1(b). This “tiering” or “incorporation by reference” allows the Staff to adopt the underlying scientific data and inferences from the analysis conducted by the other agency without independent review, so long as it exercises independent judgment with respect to conclusions about the environmental impacts relative to the current proposed agency action. *See Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), LBP-82-43A, 15 NRC 1423, 1467-68 (1982).

#### **IV. FACTUAL FINDINGS AND LEGAL CONCLUSIONS**

##### **A. Findings Regarding Contention NIRS/PC EC-1**

4.1 As admitted by the Licensing Board in its July 19 memorandum and order, *see* LBP-04-14, 60 NRC at 66, and modified by its November 22 ruling on late-filed contentions, *see* November Late-Filing Ruling at 8-10, contention NIRS/PC EC-1 reads:

###### **NIRS/PC EC-1 — IMPACTS UPON GROUND AND SURFACE WATER**

**CONTENTION:** Petitioners contend that the Environmental Report 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 C.F.R. 51.45.

The Draft Environmental Impact Statement, NUREG-1790 (September 2004) (“DEIS”) likewise 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 C.F.R. Part 51 in that:

- (A) The DEIS correctly notes that leakage from the stormwater detention basin and the septic leach fields will probably cause formation of perched bodies of groundwater at the alluvium/Chinle interface. (DEIS, 4-13, 4-14). The DEIS contains estimates of the dimensions of such water bodies, flow rates, and discharge areas. However, NRC provides no explanation of

such calculations, and it is not possible to determine whether they are reasonable.

- (B) The DEIS does not contain an estimate of the probability and frequency of leakage through the liners of the treated effluent basin or the stormwater detention basin. The basins are to be lined with geosynthetic materials (DEIS at 4-11, 4-12), such liners are known to leak (EPA, Hydrologic Evaluation of Landfill Performance (HELP) Model, User's Guide for Version 3, EPA/600/R-94/168a, Sept. 1994), and such information is necessary to demonstrate the impact of such leakage. The DEIS should contain an estimate of the leakage rate and should show the fate of water and contaminants that leak from the basins.
- (C) According to the DEIS, “. . . no precipitation recharge (i.e., rainfall seeping deeply into the ground) occurs in thick, desert vadose zones with desert vegetation (Walvoord et al., 2002)” (DEIS at 3-35). However, cuttings from one of the borings drilled in September 2003 were “slightly moist” (ER Rev. 2 at 3.4-2). In addition, the clay at the bottom of boring B-2 was “moist” (SAR at Fig. 3.2-11). The DEIS should explain the presence of this moisture, which conflicts with its statements about lack of recharge.
- (D) The DEIS states: “Although the presence of fracture zones that can significantly increase vertical water transport through the Chinle Formation has not been precluded, the low measured permeabilities indicate the absence of such zones.” (DEIS at 3-35). Two permeability measurements have been made on the Chinle Formation at or near the site: laboratory measurement of core samples (ER Rev. 2 Table 3.3-2) and a slug test performed in MW-2 (Cook-Joyce, Hydrogeologic Investigation, Sec. 32, T. 21 R. 38, Nov. 19, 2003). Such extremely limited measurements, where faults are present, cannot describe the permeability of the entire site, and NRC should explain its reliance on such restricted data.
- (E) The stormwater basin will discharge runoff containing numerous contaminants, which are not adequately identified in the DEIS, nor is their monitoring explained. LES has stated that the runoff will contain small amounts of oil and grease typically found in runoff from paved roadways and parking areas (RAI Response, May 20, 2004, at 33). However, other contaminants may be present, such as PAHs (USGS, Concentrations of PAHs and Major and Trace Elements in Simulated Rainfall Runoff from parking lots, 2003, Open File Report 2004-1208), other organics such as aliphatic hydrocarbons and alcohols (Barrett, M.E, et al., Review and Evaluation of Literature Pertaining to the Quality and Control of Pollution from Highway Runoff and Construction, Tech. Report CRWR 239, April 1993), and other contaminants from spills and accidents. Their presence should be disclosed. Further, stormwater should be monitored for such contaminants.

4.2 As an initial matter, it is important that the Board clarify the scope and subject matter of this contention. While formulated as a general contention that neither the ER nor the DEIS contains a complete or adequate assessment of the potential environmental impacts of the proposed project on ground and surface water, the substance is most properly addressed by focusing upon the details of the challenge, which concern groundwater and the potential effects of the proposed NEF upon groundwater. In fact, no testimony was presented regarding surface water, and the testimony is uncontroverted that the United States Army Corps of Engineers (USACE) has notified LES that there are no jurisdictional surface water bodies or drainage features at the NEF site. *See* Tr. at 388-89; LES Exh. 3, Tab D (Letter from J.E. Mace, USACE, to G. Harper, Framatone ANP, Inc. (Mar. 17, 2004)).

4.3 LES, the Staff, and NIRS/PC presented witnesses in support of their respective positions on contention NIRS/PC EC-1, each of whom submitted written direct and rebuttal testimony as well as giving oral testimony at the evidentiary hearing. *See* Tr. at 340-872.<sup>4</sup> LES presented two witnesses: George A. Harper, Manager of Regulatory Compliance Programs at Framatome ANP, who assisted in preparing the NEF application, *see* Tr. at 375-76, and Roger L. Peery, Senior Hydrogeologist and Chief Executive Officer at John Shomaker & Associates, Inc., hired by LES as an expert witness on hydrogeological and water resources issues. *See* Tr. at 377-78.

4.4 According to the evidence presented, Mr. Harper received a Bachelor of Science and a Master of Science in Civil Engineering from the University of Massachusetts, and is a registered professional engineer in several states. Tr. at 376. He has more than 25 years of experience in engineering, environmental, licensing, and regulatory compliance matters, including analyzing environmental, hydrologic, geotechnical, and groundwater issues relating to nuclear facilities. *Id.* Mr. Harper is familiar with the NEF and the corresponding license application in that he assisted in preparing certain portions of that application, including the ER and SAR, and in preparing LES's application for a groundwater discharge permit from the State of New Mexico. Tr. at 376-77. Based on the foregoing, the Board finds that Mr. Harper is qualified to testify as an expert witness on the subject of the impacts of the NEF on ground and surface water.

4.5 Mr. Peery has a Bachelor of Science in Geology and a Master of Science in Water Resources, both received from the University of New Mexico, and is a registered Professional Geologist. Tr. at 378. He has over 15 years of experience as a hydrogeologist, and on numerous occasions has provided expert testimony

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<sup>4</sup> Despite the Board's standard practice of citing to the prefiled testimony of expert witnesses, in this case the court reporter bound and numbered the parties' prefiled direct and rebuttal testimonies sequentially in the transcript with the oral testimony given at the February 2005 evidentiary hearing. Therefore, the Board will cite to those numbered pages of the transcript throughout this Decision.



on water resources issues before various State of New Mexico commissions and committees. *Id.* Mr. Peery was hired by LES as an expert witness on hydrogeological and water resources issues, and reviewed the relevant portions of the NEF license application in preparation for the evidentiary hearing. Tr. at 378-79. Based on the foregoing, the Board finds that Mr. Peery is qualified to testify as an expert witness on the subject of the impacts of the NEF on ground and surface water.

4.6 The NRC Staff presented one witness concerning this contention, Alan Toblin. Tr. at 650. Mr. Toblin is a consultant with Advanced Technologies and Laboratories International, Inc., and assisted the Staff in evaluating the potential environmental impacts related to the construction, operation, and decommissioning of the NEF, as well as in preparing the NEF DEIS and Staff responses to certain NIRS/PC interrogatories. Tr. at 650-51. He received a Bachelor of Engineering in Chemical Engineering from Cooper Union, and a Master of Science in Chemical Engineering from the University of Maryland. Tr. at 677. Mr. Toblin's experience consists of more than 32 years as a Principal Investigator and Technical Manager for analyses of contaminant transport in groundwater, surface water, and air environments, and has performed such analyses for various industrial sites and government agencies in support of construction, operation, and cleanup activities. *Id.* Based on the foregoing, the Board finds that Mr. Toblin is qualified to testify as an expert witness on the subject of the impacts of the NEF on ground and surface water.

4.7 Finally, NIRS/PC presented one witness, groundwater hydrologist George Rice. Tr. at 770. Mr. Rice received a Bachelor of Science in Hydrology and a Master of Science in Hydrology, both from the University of Arizona. Tr. at 797. He has over 20 years of experience in hazardous waste investigations and groundwater hydrology, including experience in modeling groundwater flow and contaminant transport and designing and installing monitoring networks. *Id.* Mr. Rice has also served as principal hydrologist responsible for the hydrologic characterization of several low-level radioactive and hazardous waste sites in the western United States. Tr. at 798. Based on the foregoing, the Board finds that Mr. Rice is qualified to testify as an expert witness on the subject of the impacts of the NEF on ground and surface water.

### ***1. NEF Site Location and Description***

4.8 The 543-acre proposed NEF site is located in the southeastern corner of New Mexico in Lea County, approximately one-half mile west of the New Mexico-Texas state line, 20 miles south of Hobbs, New Mexico, and 5 miles east of Eunice, New Mexico. *See* Staff Exh. 1b, at 3-2 (NUREG-1790, "Draft Environmental Impact Statement for the Proposed National Enrichment Facility in Lea County, New Mexico" (Sept. 2004) (redacted nonsensitive version) [hereinafter

NEF DEIS]. The site is currently owned by the State of New Mexico, and consists mostly of undeveloped land used for cattle grazing. *See id.* The area surrounding the site consists of vacant land and various industrial developments, including a railroad spur, a sand/aggregate quarry, and an oil reclamation operation. *See id.*

4.9 A hazardous waste treatment facility operated by Waste Control Specialists (WCS) is located in the State of Texas, approximately 1 mile east of the proposed NEF site. *See id.* WCS holds a 7-year renewable license for the temporary storage of low-level radioactive and mixed wastes, and owns buffer areas immediately adjacent to the eastern boundary of the proposed NEF site. *See id.* at 3-2 to 3-3. In addition, the Lea County landfill is located to the southeast of the proposed NEF site; the landfill disposes of municipal and solid wastes for Lea County, its municipalities, and other municipalities within a 100-mile radius. *See id.* at 3-3. DD Landfarm, a petroleum-contaminated-soil treatment facility, is located just to the west of the proposed site, and Dynergy Midstream Services, a natural gas gathering and processing plant, is located approximately 4 miles to the west. *See id.* Finally, a historical marker and picnic area are located approximately 2 miles west of the proposed site. *See id.*

4.10 The underlying geology of the proposed NEF site, as relevant to contention NIRS/PC EC-1, consists of three primary geologic formations: the Santa Rosa Formation, the Chinle Formation, and the Antlers Formation or alluvium. *See Tr.* at 386-87. The Antlers Formation lies closest to the surface, reaching between 1 and 55 feet below the ground, and is described as alluvial deposits comprised of sand and silty sand, with sand and gravel at the base. *See Tr.* at 387. Beneath the alluvium is the Chinle Formation, which is made up of claystone, siltstone, sandstone, and silty clay, and extends to a depth of approximately 1100 feet below surface level. *See Tr.* at 654-55. Finally, the Santa Rosa Formation is directly beneath the Chinle and ranges to a depth of approximately 1400 feet. *See id.* at 655. It is comprised primarily of sandy red beds. *See Tr.* at 387. In addition, two water-bearing siltstone or sandstone units are found within the Chinle at depths of approximately 220 feet and 600 feet. *See NEF DEIS* at 3-35 to 3-36. The first well-defined aquifer located below the site is found within the Santa Rosa Formation at a depth of more than 1100 feet. *See id.* at 3-36.

## **2. NEF Site Characterization**

4.11 The hydrology and geology at the NEF site can be reasonably well understood from the extensive studies made of neighboring sites, taken together with the specific studies performed on the NEF site, and the fact that the geology and hydrology are consistent across the region encompassed by the studies. *See Tr.* at 383-85. Specifically, as to studies of neighboring sites, the WCS site, the Lea County landfill site, and the formerly proposed Atomic Vapor Laser Isotope Separation (AVLIS) site (located adjacent to the proposed NEF site) were all

studied in preparation for their respective construction. *See* Tr. at 383, 500-07. In total, more than 200 soil borings were drilled and over 100 monitoring wells and piezometers installed in an effort to characterize the hydrogeologic conditions in areas surrounding the NEF site. *See, e.g.*, LES Exh. 3, Tab O, at 5-1 to 5-4 (Cook-Joyce, Inc. & Intera, Inc., Section VI, Geology Report, prepared for Waste Control Specialists (Feb. 2004)); *id.*, Tables 6.5-1, 6.5-2.

4.12 In addition, LES performed site-specific investigations to supplement the studies of the neighboring sites. Cooke-Joyce, Inc. (CJI), the company that completed characterization investigations at the WCS site, performed a field investigation at the NEF site in September 2003 in an effort to further characterize the hydrogeologic conditions of the water-bearing zone located at approximately 220 feet below the NEF site. *See* Tr. at 384. Nine soil borings were installed to determine whether saturated conditions were present in the shallow alluvium, and the depth to the Chinle Formation below the alluvial layer. *See, e.g.*, LES Exh. 3, Tab L, at 3 (CJI, Hydrogeologic Investigation, Section 32, Township 21 Range 38, Eunice, New Mexico (Nov. 19, 2003)) [hereinafter CJI Study]. CJI did not find groundwater in the shallow alluvium, and, accordingly, drilled three monitoring wells to a depth of 220 feet, the shallowest occurrence of saturated conditions beneath the NEF. *See* Tr. at 385. Only one of those wells has produced water thus far. *See id.* Also in September 2003, contractors for LES performed a preliminary geotechnical study of the NEF site, which consisted of drilling five borings in the proposed construction area at depths ranging from 40 to 100 feet. *See id.* Together with the studies conducted at neighboring sites, these two studies confirm that the hydrogeology of the NEF site is consistent with that of the surrounding area. *See* Tr. at 500-07.

### **3. NRC Staff Calculations Regarding Perched Bodies of Groundwater**

4.13 The parties essentially agree that groundwater may be found in “perched” bodies underground, and that in the geological conditions found at the NEF site, water would travel from the surface downward through the alluvium until it reached the Chinle Formation. *See, e.g.*, Tr. at 655. Because, as discussed further in paragraph 4.34 below, the Chinle is comprised of low-permeability materials, it essentially creates a barrier to further downward water movement, and perched groundwater could form at that interface. *See id.* Any perched bodies that formed along the interface could then potentially flow downgradient along the surface of the Chinle toward Monument Draw, an intermittent stream located approximately 3 miles from the proposed NEF site. *See* Tr. at 694-95. Discharge from the stormwater detention basin and septic leach fields at the NEF site is one possible source of water that could enter the ground and potentially create perched bodies of groundwater at the alluvium/Chinle interface. *See* Tr. at 655.

4.14 Regarding the portion of this contention (paragraph (A)) that alleges the DEIS inadequately describes the computations of the dimensions of the water bodies, flow rates, and discharge areas related to the possible formation of perched bodies of groundwater at the alluvium/Chinle interface, as the Board noted in its January 21, 2005 memorandum and order, this portion of the contention focuses on the Staff's purported failure to provide an explanation relative to these DEIS calculations. *See* First in Limine Ruling at 4-5. In other words, this paragraph asserts a contention of omission which, upon cure, becomes moot. *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, 383 (2002), *clarifying* CLI-02-17, 56 NRC 1 (2002).

4.15 The Staff provided explanations for its determinations of flow rates and dimensions of potential perched water bodies and discharge rates in both its November 10, 2004 response to NIRS/PC interrogatories and the prefiled testimony of witness Alan Toblin.<sup>5</sup> *See* NRC Staff's Response to Interrogatories and Document Request by Petitioners [NIRS/PC] to Commission Staff (Nov. 10, 2004) at 7-9; Tr. at 655-60. As a consequence, the Board concludes that the omission alleged in this contention has been cured, and the DEIS is no longer defective in the alleged respect.

#### **4. Estimate of Probability/Frequency of Leakage from Lined Basins**

4.16 Regarding the portion of this contention (paragraph (B)) that asserts the DEIS does not contain an estimate of the probability and frequency of leakage through the liners of the treated effluent basin or the stormwater retention basin,<sup>6</sup> we begin with the observation that there is no perfect (100% probability) engineered system. That is precisely the reason the NRC has adopted its "defense-in-depth" approach, which requires a series of engineered barriers to protect against radiation exposures to the public and the environment. *See* 10 C.F.R. § 70.64(b).

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<sup>5</sup>Specifically, the Staff applied Darcy's Law to determine the estimated impact of the unlined stormwater detention basin. With regard to flow rates of potential perched water bodies, Staff calculations resulted in an estimated rate of 0.0002 centimeter per second or 63.1 meters per year, *see* Tr. at 658; with regard to basin discharge rate, the Staff estimated a flow of 180,000 cubic meters per year (m<sup>3</sup>/yr), *see* Tr. at 657; and with regard to potential dimensions of those bodies, the Staff estimated the cross-sectional areas of perched water from the detention basin and septic system to be 2850 square meters (m<sup>2</sup>) and 116 m<sup>2</sup>, respectively, *see* Tr. at 659, and the depth of those bodies to be approximately 2.85 m and 1.16 m, respectively, *see id.*

<sup>6</sup>Although paragraph (B) of this contention makes reference to the "stormwater *detention* basin," given the focus in this paragraph on basin liners coupled with the fact that the stormwater detention basin is not a lined basin, and the lack of contradictory information on the record before us, the Board assumes that NIRS/PC intended to reference the lined "stormwater *retention* basin."

4.17 NIRS/PC put forth evidence, discussed further below, of leakage data for various liners. *See* Tr. at 786-87. Witnesses for each of the parties testified about the possibility that liners, on occasion, may leak, and that this possibility could not be absolutely precluded at the NEF site. *See, e.g.*, Tr. at 664, 786-87; NIRS/PC Exh. 17, at 117-18 (Deposition Transcript of G. Harper and R. Peery (Sept. 17, 2004)). Therefore, while the Board agrees with NIRS/PC that it is unlikely a liner will be 100% leak-free, such a “no leak” requirement does not exist in this instance. Rather, each basin of the NEF system must be reasonably engineered, constructed, and maintained to minimize leakage and to alert the NEF when leakage that could endanger human health or the environment occurs.

4.18 Section 4.2.6.2 of the DEIS describes the two lined basins at the proposed NEF, the treated effluent evaporative basin (TEEB) and the uranium byproduct cylinder storage pad stormwater retention basin (USPSRB), as well as the unlined stormwater detention basin. *See* NEF DEIS at 4-12 to 4-13. Figure 4-2 of the DEIS depicts the basins and septic tank system locations at the proposed site. *Id.* at 4-12.

4.19 The TEEB is a double-lined basin with a leak-detection system between the liners consisting of, from the bottom up, a 2-foot prepared clay layer, a membrane liner, a drainage collection system (which will be used to detect leakage between the liners), a second membrane liner, and a layer of clay at least 1 foot deep. *See* Tr. at 602. Uranium-bearing effluent from the Liquid Effluent Collection and Treatment System, and shower, hand wash, and laundry effluents will be collected in the TEEB. *See* Tr. at 393, 662.

4.20 The USPSRB, which will hold cooling tower blowdown discharges, heating boiler blowdown discharges, and stormwater runoff from the Uranium Byproduct Cylinders (UBC) Storage Pad, *see* Tr. at 393, is made of, from the bottom up, a 2-foot layer of clay, a membrane liner, and a 1-foot clay layer. *See* Tr. at 603. The water collected in the USPSRB will contain normal components of drinking water, such as calcium, chloride, magnesium, sodium, and sulfate. *See* Tr. at 662-63; NEF DEIS at 3-41. In addition, the UBCs containing depleted uranium hexafluoride ( $DUF_6$ ) will be surveyed for external contamination prior to being placed on the UBC Storage Pad and will be monitored during their storage on the pad. Tr. at 396. Water and sediment samples will be collected quarterly from the USPSRB to ensure that uranic material is not deposited in the basin. Tr. at 397. Therefore, runoff from these sources is not reasonably expected to contain NRC-regulated materials.

4.21 LES witnesses testified that all three liners, two in the TEEB and one in the USPSRB, will be installed in accordance with NMED Guidelines, will be preapproved by both a professional engineer and NMED prior to installation, *see* Tr. at 603, and will be installed by manufacturer-certified installers according to project specifications, *see* Tr. at 420. The liner maintenance program at the NEF includes methods to identify, locate, and patch leaks. *See id.* In addition, six

monitoring wells will be installed at five locations to monitor groundwater in the shallowest saturated unit approximately 220 feet below ground surface, *see* Tr. at 395-96, 609, and the drainage piping between the two liners of the TEEB will be monitored, *see* Tr. at 420.

4.22 LES witnesses further testified they expect approximately 390 microcuries per year of uranium to be discharged to the TEEB and, as a point of comparison, noted that if all the uranium expected to be discharged to the TEEB over 30 years were uniformly distributed in the soil below the TEEB over a depth of 20 feet, that uranium concentration would be equivalent to the naturally occurring uranium concentration in the soil at the proposed NEF site. *See* Tr. at 395; LES Exh. 10, at 1 (Framatome ANP, Inc., Calculation Summary Sheet, TEEB Soil Concentration and Integrated Liner Dose (Nov. 18, 2004)). While this is not a definitive indication of any specific, expected uranium release concentration, it does provide a good indicator of the actual aggregate amounts involved. Furthermore, the relatively impermeable clay layer underlying the lower synthetic liner of the TEEB is expected to absorb leakage and during that process absorb and hold any small amount of uranium that might be released, thereby preventing the escape of uranium beyond this layer. *See* Tr. at 664-65.

4.23 Nonetheless, NIRS/PC contends that, because there is the possibility of leakage from these lined basins, the DEIS must provide estimates of the probability and frequency of leakage, as well as the leakage rate. NIRS/PC witness Rice presented evidence regarding leakage data on various liners and indicated that, although the specific liners studied may not be the same as those used at the NEF, the factors that cause liners to leak, such as manufacturing defects, installation defects, and deterioration after installation, are common to all liners. *See* Tr. at 786-87, 814-15. Mr. Rice thus concluded that the possibility of leakage should be examined, and leakage rates estimated. *See* Tr. at 814.

4.24 Staff witness Toblin testified that, even given the evidence presented by NIRS/PC regarding leakage data for various liners, currently it is not possible to predict leakage rates based on many uncertainties underlying the proposed calculations. *See* Tr. at 661. Initially, he indicated that the specific designs for the TEEB and USPSRB have not yet been finalized and, therefore, it is not known what specific liner materials will be utilized. *See* Tr. at 713. Additionally, Mr. Toblin testified that even with information regarding the specific design, he would have to assign numerical values to the number of tears over a particular liner area and the number of tears expected over time, values that the study referred to by Mr. Rice could not provide. *See* Tr. at 661, 761. Finally, Mr. Toblin testified that in calculating a leakage rate, he would have to include the additional factor of whether, and for how long, water was present in the particular lined basin, thereby adding a third uncertainty to the calculation. Tr. at 661. Given these uncertainties, Mr. Toblin concluded, he could not provide a meaningful quantitative assessment of the probability and frequency of liner leakage or the leakage rate. *Id.*

4.25 Agreeing with Mr. Toblin's view, we find there currently is no scientifically sound means of estimating the probability, frequency, and rate of liner leakage from the lined basins proposed to be constructed at the NEF. Therefore, the fact the Staff did not perform such an analysis does not represent a shortcoming in the DEIS. Furthermore, when considered in conjunction with Mr. Toblin's testimony, we find the DEIS contains a sufficient analysis of leakage, and the fate of water and contaminants that might leak, from the lined basins in question.

### **5. Explanation of Moisture Presence in Borings**

4.26 Regarding the portion of this contention (paragraph (C)) that claims the DEIS should explain the presence of moisture found in boring B-9 and boring B-2, and the asserted conflict with DEIS statements about lack of recharge, section 3.8.1 of the DEIS discusses site and regional hydrogeology, including the lack of precipitation recharge, and notes that field investigations and computer modeling indicated that no precipitation recharge occurs at sites with thick vadose zones such as the proposed NEF. *See* NEF DEIS at 3-34 to 3-35.

4.27 As noted in paragraph 4.12 above, as part of its effort to characterize the hydrogeology of the NEF site, fourteen borings were drilled at the site, which included nine groundwater exploration borings taken by CJI and five geotechnical borings taken by Mactec Engineering and Consulting. *See* Tr. at 404. Moisture was found in boring B-2, a geotechnical boring that was described as "moist" at a depth of 35 to 41.4 feet, and boring B-9, a groundwater exploration boring that was labeled as "slightly moist" at a depth of 6 to 14 feet. *See* CJI Study, App. A. While some moisture was indeed found in those two borings, no moisture was found in any of the other boring locations. *See id.* In addition, at least fifty-five soil borings were taken at the neighboring site, many of which were found to be "moist," "slightly moist," or "damp" at a depth of approximately 200 feet. *See* Tr. at 449; LES Exh. 3, Tab G (Terra Dynamic, Inc., Soil Boring Logs, [WCS] Andrews County Landfill Site, 1992-1993).

4.28 NIRS/PC witness Rice posited that the moisture in the two borings at the NEF site was an indication of episodic recharge because a portion of infiltrated precipitation would make its way to the alluvial/Chinle contact and flow along that contact. *See* Tr. at 810. As further evidence of such recharge, Mr. Rice cited the moisture found in the borings at the WCS site, which in his view indicated that some recharge currently occurs at that site. *See* Tr. at 776.

4.29 Mr. Peery testified, however, that LES had been advised by the individuals who prepared the boring logs for the NEF site that the moisture logged was not a reflection of the existence of saturated conditions at the site and, in his opinion, represented some "residual" moisture attributable to the moisture storage capacity of the soil in the vadose zone. *See* Tr. at 424, 540. Mr. Peery further testified that, with regard to the WCS borings, the moisture was logged at

the alluvial/Chinle contact, followed by a notation of dry conditions in the Chinle below it, indicating that water does not migrate vertically through the Chinle red bed surface. *See* Tr. at 544. According to the LES panel, findings of moisture at that depth are also consistent with the groundwater zone known to exist at a depth of approximately 220 feet. *See* Tr. at 449; *supra* paragraph 4.10; NEF DEIS at 3-35.

4.30 In addition, Mr. Toblin pointed out that, given the relatively uniform subsurface conditions in the area, precipitation recharge would be expected to be present over a wide area at multiple borings if it were occurring and, therefore, the presence of moisture in the two NEF borings does not indicate precipitation recharge at the proposed site, particularly given the presence of “very dry” soils above and below the levels of the moisture found in the B-9 boring. *See* Tr. at 666-67. Mr. Toblin further observed that the absence of moisture below the moist area is consistent with the conclusion that precipitation does not seep deeply into the ground at the proposed site. Instead, precipitation that does infiltrate into the subsurface is subject to upward hydraulic gradients caused by vaporization and evapotranspiration, both of which draw water upwards toward the surface. *See* Tr. at 667; NEF DEIS at 3-35.

4.31 Based upon the Board’s review of the evidence and the testimony presented, the Board finds that the isolated presence of moisture in borings B-2 and B-9 at the proposed NEF site could be attributed to a variety of sources and is not, in and of itself, indicative of precipitation recharge and, therefore, such isolated moisture is not inconsistent with a finding that there is no precipitation recharge. Nor is the moisture found in the WCS borings inconsistent with a determination there is no precipitation recharge at or around the NEF site. The Board, therefore, finds that the conclusion in the NEF DEIS that there is no precipitation recharge at the proposed NEF site is reasonably supported.

## ***6. Adequacy of Staff Assessment of Potential Fracture Zones***

4.32 Regarding the portion of this contention (paragraph (D)) asserting that, given its admission that the presence of fracture zones that can significantly increase vertical water transport through the Chinle Formation has not been precluded, the Staff should explain why it relied upon only two permeability measurements for its NEF DEIS conclusion that the low measured permeabilities indicate the absence of such fractures. The issue for the Board in this context is whether the Staff can reasonably conclude there are no material flow paths between various aquifers below the proposed NEF site and the surrounding region.

4.33 As noted above, NIRS/PC contends the Staff relied upon only two permeability measurements. In our view, however, it is more accurate to say that the Staff relied upon two *types* of permeability measurements, i.e., an in situ slug test from the NEF site and laboratory tests conducted on samples taken from the



WCS site. *See* Tr. at 670, 779. Slug tests, which measure permeability at a site by suddenly changing the static water level in a well, are conducted by rapidly adding or removing water and measuring the time it takes to return to its static level. *See* Tr. at 670. The NEF site slug test was performed at a monitoring well installed at the site — MW-2 — that had been found to produce groundwater. *See* CJI Study at 6-8. Thirty-six vertical permeability tests and six horizontal permeability tests were performed in the laboratory on the WCS site samples. *See* Tr. at 670; LES Exh. 3, Tab E, at 10 (Jack Holt & Associates, Inc., Geotechnical Investigation and Engineering Analysis for [WCS] Landfill Project, Andrews County, Texas (Mar. 12, 1993)). The Staff determined that the permeability findings from these samples are applicable to the proposed NEF site given their similar underlying geologic structures, including the Chinle Formation. *See* Tr. at 670.

4.34 The laboratory tests show that the Chinle Formation clays at the WCS site are highly impervious, *see* Tr. at 390-91, and that the siltstones/sandstones within the Chinle also have very low permeabilities and do not readily transmit water, *see* Tr. at 553-54. Permeabilities determined by those tests range from less than  $10^{-9}$  to  $1.76 \times 10^{-8}$  centimeters per second (cm/s) for the clay taken from the Chinle Formation. Tr. at 671. Tests on the sandstone and siltstone beds determined a range of permeabilities from  $2.58 \times 10^{-8}$  to  $1.93 \times 10^{-6}$  cm/s. *Id.* By comparison, a permeability of  $3.7 \times 10^{-6}$  cm/s was measured with the slug test performed at MW-2 at the NEF site. *Id.*

4.35 While there was significant disagreement over whether in situ measurements of permeability produce more accurate measurement than laboratory tests performed on samples, *see, e.g.*, Tr. at 459-61, 692-93, 779-80, the difference in the results is not important given that the soil in question is clay, which is of very low permeability. From our perspective, the dispute is over whether the permeability number is extremely small, or minuscule.

4.36 Also underlying this contention is the question whether the Staff took a “hard look” at the possible existence of networks of fractures in the Chinle red beds that, collectively, could be sufficient to allow water at the interface of the Antlers and Chinle Formations to flow into the sandstone aquifer located approximately 220 feet below ground level. *See, e.g.*, Tr. at 779. This is relevant only because of the concern there are “fast flow paths” that could carry leakage or runoff from any of the basins on the NEF site down into the aquifer. And in this regard, independent of the fact a large number of permeability measurements were made in the area that provide a good indication of the overall and average permeability between the alluvium and the aquifer, ample evidence was elicited during the cross-examination of Mr. Peery and Mr. Harper that many well logs showed a variety of fractures, or evidence of fractures with mineralization. *See* Tr. at 547-85. While some of these fractures may have been induced by the sampling method, *see* Tr. at 557, there appears little reason to doubt that fractures do exist within the Chinle Formation. The question, then, is whether further

investigation is needed to determine if some or all of these cracks form such a strongly interconnected and sufficiently open network that it offers a relatively permeable flow path from the surface through the alluvium to the saturated sandstone aquifer.

4.37 In considerable measure, this matter is resolved by the fact that when a well was drilled into the sandstone at approximately 220 feet below the surface, water rose slowly into the hole to a level of about 120 feet below the surface. *See* Tr. at 585-86, 591. This indicates that the aquifer is confined with a hydrostatic head sufficient to lift water approximately 100 feet if relieved. In other words, about 43 pounds per square inch of pressure is exerted on the aquifer. Were there a significant flow path, or set of flow paths, through the alluvium to the aquifer in question, one would expect to find material amounts of water at levels well above the aquifer, even if confined to pockets formed around such flow paths. *See* Tr. at 591-92. In addition, if the flow path were sufficiently unrestricted, one would expect to find water at the height to which it eventually rose in the well that was drilled into the aquifer. *See id.* Since none of the borings found water at such locations, it is reasonable to conclude that, although there might be very localized pockets of water formed around fractures that do not permit good hydraulic communication between the aquifer and soil levels above it, there are no flow paths sufficient to relieve the overpressure in the aquifer, and thus there are no material flow paths that would allow water to flow in the reverse direction (i.e., that would allow reasonably unrestricted flow of water from the surface through the alluvium to the aquifer). In addition, Mr. Peery noted that the various water-bearing zones beneath the proposed NEF site have very large differences in hydraulic head (i.e., pressure), which indicates a lack of hydraulic communication and strongly suggests there are no fracture zones that act as fast flow paths. *See* Tr. at 389, 452. Staff witness Toblin presented confirmatory testimony, noting the results of the investigations near the proposed NEF site indicate it is unlikely there are fracture zones that lead to fast flow paths. *See* Tr. at 672.

4.38 This does not, of course, rule out the possibility that one or more small pathways exist, but offer so high a resistance to flow that the pressure in the aquifer is maintained. It does, however, indicate there can be no pathway that would permit a substantial flow of water between the alluvium and the sandstone aquifer. This finding is consistent with statements of LES witnesses to the effect that the low permeability of the Chinle red beds underlying the proposed site suggest the lack of highly fractured zones because, if these subsurface units were highly fractured, their hydraulic conductivities would be much higher than previously determined for the NEF and WCS sites. *See* Tr. at 403.

4.39 Based on the foregoing, the Board finds the NEF DEIS is not based, as NIRS/PC contends, upon “extremely limited measurements . . . [that] cannot describe the permeability of the entire site”; rather, the Board finds the measurements at neighboring sites provide relevant information regarding the NEF site

and, taken together, adequately inform the investigation for the NEF. Furthermore, while the Board finds the evidence supports the conclusion that limited localized faults are present, the evidence clearly indicates there are no material faults or fast flow pathways that would permit significant hydraulic connectivity between any of the aquifers at issue or from one or more of those aquifers to the surface. The Board finds that, on the whole, the information utilized by the Staff in developing the NEF DEIS provided reliable bases for concluding that the permeability of the soil beneath the proposed site is very low, and that the Staff has adequately explained the basis for its determination regarding vertical water transport through the Chinle Formation.

### **7. *Presence and Monitoring of Contaminants***

4.40 Regarding the portion of this contention (paragraph (E)) that maintains that the stormwater detention basin<sup>7</sup> will discharge runoff containing numerous contaminants that the Staff in the NEF DEIS has neither properly identified nor provided an adequate explanation of how they will be monitored, the DEIS (1) addresses generally the contents of the stormwater runoff at pages 4-10 to 4-11, *see* Tr. at 673; (2) reviews and evaluates LES's planned implementation of the Spill Prevention Control and Countermeasures Plan and its Stormwater Pollution Prevention Plan at pages 4-10 and 4-15, respectively, *see* Tr. at 673-74; (3) lists in Table 4-21 all contaminants the Staff believes would be expected to be involved in an industrial accident (and lists all process chemicals and gases that would be used at the proposed NEF), *see* Tr. at 674; Staff Exh. 1a, at 4-70 to 4-71 (Draft Environmental Impact Statement for the Proposed National Enrichment Facility in Lea County, New Mexico, NUREG-1790 (Sept. 2004) (unredacted sensitive version)); and (4) describes LES's monitoring program including setting out in Table 6-9, the parameters that will be monitored, *see* Tr. at 673; NEF DEIS at 6-18. In addition, section 6.2 of the ER sets forth LES's proposed physiochemical monitoring program, which encompasses the Site Stormwater Detention Basin, *see* LES Exh. 2, at 6.2-1 to 6.2-5 (LES, National Enrichment Facility Environmental Report §§ 6.1, 6.2 (2004)), and ER Table 6.2-2 sets forth the various parameters to be monitored by LES, as well as the monitoring frequency, sample type, and lower limit of detection, with respect to stormwater detention basin discharges, *see* Tr. at 426.

4.41 NIRS/PC, however, has specifically raised the question of detection and control of contaminants typically associated with roads, parking lots, and

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<sup>7</sup> Similar to paragraph (B) of this contention, paragraph (E) is somewhat ambiguous on its face as to whether the stormwater *retention* or *detention* basin is at issue. Given the context of paragraph (E) itself, and the testimony and evidence on the record before the Board, it is clear that the stormwater *detention* basin is the subject of this part of the contention.

industrial facilities, such as polycyclic aromatic hydrocarbons (PAHs) and other organics. Mr. Rice testified that biological oxygen demand (BOD) and chemical oxygen demand (COD) analyses, mentioned in DEIS Table 6-9, do not detect the presence of individual contaminants such as PAHs, but instead are gross measures of the amount of organic matter in water, as indicated by changes in the concentration of oxygen or some other oxidant. *See* Tr. at 826; NIRS/PC Exh. 16, at 3 (Hach Co., *The Science of Chemical Oxygen Demand*, Technical Information Series, Booklet No. 9 (2004)). Furthermore, according to Mr. Rice, the detection limits proposed for BOD and COD are 2 milligrams per liter (mg/L) and 1 mg/L, respectively, whereas the drinking water standards for some PAHs are much lower than these detection limits. *See* Tr. at 826. For example, the human health standard for the PAH benzo[*a*]pyrene is 0.0007 mg/L. *See* NIRS/PC Exh. 36, at 12 (New Mexico Water Quality Control Commission, *Regulations, 20.6.2 NMAC* (2002)). Thus, Mr. Rice declares, even if PAHs could be detected by BOD or COD analyses, some of them only would be detected once their concentrations exceeded standards by a factor of more than 1000. *See* Tr. at 826.

4.42 The Staff acknowledged that PAHs and other organics can be introduced into the environment of an industrial facility such as the proposed NEF through emissions from generators or motor vehicles, or can result from runoff from surface sealed parking lots. *See* Tr. at 674-75. Mr. Toblin testified that the presence of these contaminants is detected by the monitoring of COD and BOD, both of which are listed in Table 6-9 of the NEF DEIS as being monitored. *See* Tr. at 675-76. Instead of addressing specific detection limits, however, Staff witness Toblin pointed out that the NEF ER contains a commitment to have its monitoring program reflect applicable regulatory requirements, and that the Site Stormwater Detention Basin will adhere to the requirements of the Groundwater Discharge Permit/Plan from the New Mexico Water Quality Board. *See* Tr. at 426.

4.43 It is important to recognize that monitoring of these contaminants is regulated through the State of New Mexico's Groundwater Discharge Permit, not by the NRC. Therefore, the Board need not address NIRS/PC's argument that the levels of detection and control are insufficient because this is a matter outside the Board's purview. While the DEIS must address the monitoring of contaminants in the effluent, compliance with State requirements is, in the first instance, a matter for the State. *See Consolidated Edison Co. of New York* (Indian Point, Unit 2), ALAB-453, 7 NRC 31, 34 (1978).

4.44 Accordingly, as to the assertion that contaminants in the stormwater runoff are neither adequately identified in the DEIS nor is their monitoring sufficiently explained or implemented, the Board finds that (1) the Staff has disclosed potential contaminants and described LES's proposed monitoring for those items of concern to NIRS/PC, which is sufficient to satisfy the Staff's NEPA obligation in this instance; and (2) regulatory authority over those items is outside

the purview of this agency, belonging instead to the State of New Mexico, with whose requirements LES has committed, and presumably will be held, to comply.

## **8. Overall Holding**

4.45 Based upon the foregoing, and the testimony and evidence in the record before the Board, relative to the matters raised by Intervenor NIRS/PC in its contention EC-1, we find the Environmental Report contained in the NEF application and the Draft Environmental Impact Statement for the NEF do, in fact, contain an adequate assessment of the potential environmental impacts of the proposed project on ground and surface water.

### **B. Findings Regarding Contention NIRS/PC EC-2**

4.46 As admitted by the Licensing Board in its July 19 memorandum and order, *see* LBP-04-14, 60 NRC at 66-67, and modified by its November 22 ruling on late-filed contentions, *see* November Late-Filing Ruling at 10-11, contention NIRS/PC EC-2 states that:

#### **NIRS/PC EC-2 — IMPACT UPON WATER SUPPLIES**

**CONTENTION:** Petitioners contend that the Environmental Report (ER) contained in the application does not contain a complete or adequate assessment of the potential environmental impacts of the proposed project upon water supplies in the area of the project, contrary to 10 C.F.R. 51.45.

To introduce a new industrial facility with significant water needs in an area with a projected water shortage runs counter to the federal responsibility to act “as a trustee of the environment for succeeding generations,” according to the National Environmental Policy Act § 101(b)(1) and 55 U.S.C. § 4331(b)(1). To present a full statement of the costs and benefits of the proposed facility the ER should set forth the impacts of the National Enrichment Facility on groundwater supplies.

The DEIS does compare the water use of the proposed facility to the amount of water stored in the Ogallala Aquifer in the entire State of New Mexico (DEIS at 4-15). However, NRC has not shown in the DEIS how this pumpage would affect water levels and the long-term productivity of the Hobbs well field or the Lea County Underground Water Basin.

4.47 Each of the parties presented witnesses with regard to contention NIRS/PC EC-2, each of whom submitted written direct and rebuttal testimony for the record and gave oral testimony at the evidentiary hearing. *See* Tr. at 1169-1380. LES presented a panel of five witnesses: (1) Rod M. Krich, Vice President of Licensing Projects for Exelon Nuclear, who is “on loan” to LES

as Vice President of Licensing, Safety, and Nuclear Engineering, *see* Tr. at 1184; (2) George R. Campbell, Senior Mechanical Engineering Consultant for Lockwood Greene Engineering and Construction Co., a primary contractor on the NEF project, *see* Tr. at 1186-87; (3) Roger L. Peery, Senior Hydrogeologist and Chief Executive Officer at John Shomaker & Associates, Inc., who has been hired by LES as an expert witness on hydrogeological and water resources issues, *see* Tr. at 1187-89; (4) Len R. Stokes, an independent consultant and founder and President of Progressive Environmental Systems, Inc., who has been hired by LES as an expert witness on water resource issues, *see* Tr. at 1189-90; and (5) Timothy M. Woomer, Director of Utilities for the City of Hobbs, New Mexico, who negotiated and executed a memorandum of understanding (MOU) with LES regarding the availability of the Hobbs municipal water supply system for use at the NEF, *see* Tr. at 1191-92.

4.48 Mr. Krich holds a Bachelor of Science in Mechanical Engineering from the New Jersey Institute of Technology, and a Master of Science in Nuclear Engineering from the University of Illinois, and has more than 30 years of experience in the nuclear industry, including engineering, licensing, and regulatory matters. *See* Tr. at 1185. In his position at LES, Mr. Krich has overall responsibility for licensing and engineering matters related to the NEF, and oversaw the preparation and submittal of the NEF license application. *Id.* In addition, Mr. Krich is responsible for the preparation of all state and federal permit applications related to the NEF. *Id.* Based on the foregoing, the Board finds that Mr. Krich is qualified to testify as an expert witness on the subject of the impacts of the NEF on water supplies.

4.49 According to the evidence presented, Mr. Campbell received a Bachelor's Degree in Mechanical Engineering Technology from the University of North Carolina at Charlotte, and has more than 30 years of experience in mechanical and process engineering, 12 of which he has spent in the nuclear industry in activities associated with power plant design and engineering supervision. Tr. at 1187. As a Mechanical Engineer at Lockwood Greene, Mr. Campbell was involved in preparing certain portions of the NEF application, including supervising the design effort for the liquid effluent collection and treatment system, and facility engineering for the decontamination and waste storage and disposal systems. *Id.* In addition, Mr. Campbell played a principal role in estimating the NEF's water usage requirements, assessing potential water supply options, and negotiating agreements with the City of Hobbs and the City of Eunice for use of their municipal water supply systems. *Id.* Based on the foregoing, the Board finds that Mr. Campbell is qualified to testify as an expert witness on the subject of the impacts of the NEF on water supplies.

4.50 Mr. Peery's background and expert qualifications are discussed at pp. 407-08 *supra*. Based on that discussion and the subject matter of the contention

at hand, the Board finds that Mr. Peery is qualified to testify as an expert witness on the subject of the impacts of the NEF on water supplies.

4.51 Mr. Stokes's educational background includes studies at New Mexico State University. Tr. at 1190. He has worked as a water resource consultant in the State of New Mexico for approximately 10 years, and has provided water rights negotiation, permitting, contracting, and consulting services to numerous clients, including in the development and review of the Lea County Regional Water Plan. *Id.* In addition, Mr. Stokes has provided testimony in administrative proceedings before the New Mexico Office of the State Engineer, and expert testimony on water supply and water rights issues before the Federal Bankruptcy Court in New Mexico. *Id.* Mr. Stokes was hired by LES as an expert witness on water resource issues, and he has reviewed the relevant portions of the NEF license application and the DEIS in preparation for his testimony. *Id.* Based on the foregoing, the Board finds that Mr. Stokes is qualified to testify as an expert witness on the subject of the impacts of the NEF on water supplies.

4.52 Finally, Mr. Woomer holds a Bachelor of Science in Mining Engineering from West Virginia University, has over a decade of experience as a mine engineer, and currently serves as the Director of Utilities for the City of Hobbs. *See* Tr. at 1192. As Director of Utilities, Mr. Woomer is responsible for managing and supervising, among others, the water production and water distribution for the City of Hobbs, including formulating, evaluating, and implementing short- and long-term plans to meet the city's present and future water needs. Tr. at 1191. He was also responsible for negotiating and executing an MOU between the City of Hobbs and LES that would make water available to the NEF from the Hobbs municipal water supply system, and thus has some familiarity with the projected NEF water requirements. Tr. at 1192. Based on the foregoing, the Board finds that Mr. Woomer is qualified to testify as an expert witness on the subject of the impacts of the NEF on local water supplies.

4.53 The Staff presented one witness regarding contention EC-2, Alan Toblin. *See* Tr. at 1311. Mr. Toblin's background and professional qualifications are discussed in detail at p. 408, *supra*. Based on that discussion and the subject matter of the contention at hand, the Board finds that Mr. Toblin is qualified to testify as an expert witness on the subject of the impacts of the NEF on water supplies.

4.54 NIRS/PC also presented one witness, George Rice, whose background and professional qualifications are laid out at p. 408, *supra*. Based on that discussion and the subject matter of the contention at hand, the Board finds that Mr. Rice is qualified to testify as an expert witness on the subject of the impacts of the NEF on water supplies.

## ***1. Water Usage Requirements for the NEF***

4.55 The NEF ER contains estimates of the anticipated average and peak plant water consumption for the NEF in Tables 3.4-4 and 3.4-5. *See* LES Exh. 1, Tables 3.4-4 and 3.4-5 (LES, National Enrichment Facility Environmental Report, §§ 3.3, 3.4, 4.4 (2004)) [hereinafter ER 3.3, 3.4, 4.4]. On a typical day, the NEF would require water for routine process and mechanical operations, including decontamination, rinse water, sludge removal, and operation of the cooling water tower, and other typical sanitary purposes such as laundry, showers, and hand washing. *See* Tr. at 1196; ER 3.3, 3.4, 4.4, Table 3.4-4. The projected water use for the NEF during such regular operation is expected to be approximately 63,423 gallons per day, or 71.1 acre-feet per year. *See id.*

4.56 The estimated NEF peak water usage rate is 378 gallons per minute, or approximately 540,000 gallons per day. *See* Tr. at 1196; ER 3.3, 3.4, 4.4, at 4.4-6, Table 3.4-5. This peak rate will, however, occur only when the NEF fills its fire water tanks, an event that, in addition to the initial fill, is expected to occur only a few times over the life of the facility and is accomplished in 8 hours. *See* Tr. at 1195-96, 1246.

## ***2. Source of NEF Water Supply***

4.57 Witnesses for LES testified that the NEF intends to get 100% of its water supply from either the City of Hobbs, New Mexico, or the City of Eunice, New Mexico, and has an MOU with each entity to supply the full requirements of the NEF. *See* Tr. at 1195; *see also* LES Exh. 22 (Letter from T. Woomer, Director of Utilities for City of Hobbs, New Mexico, to J. Shaw, Lockwood Greene/LES (Dec. 30, 2003)); LES Exh. 23 (Letter from J. Shaw, Lockwood Greene/LES, to J. Brown, Mayor of Eunice, New Mexico (Jan. 21, 2004)). Therefore, the NEF will not utilize surface water or groundwater from the NEF site. *See* Tr. at 1195; NEF DEIS at 3-37; ER 3.3, 3.4, 4.4, at 3.4-9.

4.58 The Hobbs and Eunice municipal water supply systems both draw their water from the Ogallala Aquifer, an underground reservoir extending under the high plains from west of the Mississippi River to east of the Rocky Mountains, and underlying 450,000 square kilometers (174,000 square miles) in parts of eight states, including New Mexico and Texas. *See* NEF DEIS at 3-37. Approximately 1.5% of the Ogallala Aquifer's water (60 billion cubic meters, or 16 trillion gallons) is located under New Mexico. *See* Tr. at 1313; NEF DEIS at 3-37. The portion of the Ogallala Aquifer that lies below Lea County is called the Lea County Underground Water Basin, and that basin supplies the Hobbs well field, a set of wells from which both the Hobbs and Eunice municipal systems draw. *See* Tr. at 1313. In 1995, the total groundwater withdrawal in Lea County was approximately 600,000 cubic meters (160 million gallons) per day, the majority



of which was from the Lea County Underground Water Basin. *Id.*; *see also* LES Exh. 26, Executive Summary at 1 (Leedshill-Herkenhoff, Inc., John Shomaker & Associates, Inc., Montgomery & Andrews, P.A., Final Report — Lea County Regional Water Plan (Dec. 7, 2000)) [hereinafter Water Plan].

4.59 The projected daily water requirements for the NEF are quite small when viewed in relation to the current capacities of the Hobbs and Eunice municipal water supply systems. The Hobbs system has a current capacity of 20 million gallons per day, and the Eunice system a capacity of 4.32 million gallons per day. *See* ER 3.3, 3.4, 4.4 at 4.4-6. The projected usages during normal operations thus total approximately 0.3% of the daily capacity of the Hobbs system and approximately 1.5% of the Eunice system daily capacity. *See* Tr. at 1197. This estimated daily usage rate is, by one estimate, approximately the same amount of water needed to irrigate 25 acres of farmland. *See* Tr. at 1198; LES Exh. 24 (Lea County Water Users Association, Press Release Regarding NEF Water Usage Requirements (Sept. 29, 2003)). By means of comparison, while the NEF is projected to require 71.1 acre-feet of water per year, the Eunice golf course, the Hobbs Country Club, and the New Mexico Game Commission each use, respectively, 210 acre-feet per year, 283 acre-feet per year, and 170 acre-feet per year. *See* Tr. at 1198.

### **3. *Relative Impact of NEF Water Usage on Lea County Water Supply***

4.60 In the State of New Mexico, all water is public water. In the case of declared administrative water basins such as the Lea County Underground Water Basin, however, no water may be used without a “water right.” *See* Tr. at 1203. Water rights are granted by permits issued by the New Mexico Office of the State Engineer and are provided only for “beneficial uses,” including industrial uses. *See* Tr. at 1203. The City of Hobbs holds in excess of 20,000 acre-feet per year of permitted water rights, of which it currently uses less than 9000 acre-feet per year, and the City of Eunice holds approximately 3300 acre-feet per year, of which it currently uses about 50%. *See* Tr. at 1202. Given that the NEF is projected to require only approximately 71.1 acre-feet of water per year, and both the Hobbs and Eunice systems have more than enough permitted water rights available to meet that requirement, the anticipated NEF water supply is, from a regulatory standpoint, already being “used” by the cities of Hobbs and Eunice. *See* Tr. at 1204. Therefore, under the current usage rates in Hobbs and Eunice, the amount of water rights permitted to each city, and the projected usage at the NEF, the NEF will not place any significant additional strain on the region’s water supplies.

4.61 NIRS/PC pointed out that the Lea County Regional Water Plan indicates that groundwater in the Lea County Underground Water Basin is being pumped at a rate faster than it is being recharged, i.e., the basin is a “mined” basin. *See* Tr. at 1354; Water Plan at 5-4. NIRS/PC expert Mr. Rice stated that neither the Staff

nor LES had determined how pumpage for the proposed NEF would affect the long-term productivity of the Hobbs well field or the Lea County Underground Water Basin, *see* Tr. at 1355, and suggested that the long-term effects of NEF water use “could be estimated by simulating pumpage from the Hobbs well field both with and without the additional pumpage required for the proposed NEF,” *id.*

4.62 LES witnesses concluded that no such analysis is necessary because of the extremely small portion of the Hobbs water rights and usage that would be consumed by the NEF. *See* Tr. at 1236. Mr. Woomer, the Director of Utilities for the City of Hobbs, testified that the annual actual use of water within the City of Hobbs varies from year to year by hundreds of acre-feet, and that the small incremental use by the NEF (approximately 71.1 acre-feet) is within that normal variation. *See* Tr. at 1282. Mr. Stokes added that such a de minimis number would not justify running a computational simulation. *See* Tr. at 1295.

4.63 Mr. Toblin, on the other hand, testified for the Staff that he had obtained a copy of the computer model of the Lea County Underground Water Basin from the New Mexico Office of the State Engineer to run a simulation similar to that suggested by Mr. Rice. *See* Tr. at 1315-16; Staff Exh. 21 (G. Musharrafieh and M. Chudnoff, New Mexico Office of the State Engineer, Hydrology Bureau Report 99-1, Numerical Simulation of Groundwater Flow for Water Rights Administration in the Lea County Underground Water Basin New Mexico (Jan. 1999)). Specifically, Mr. Toblin applied all model assumptions and parameters used by the State (based on historical water levels within the basin from 1948 to 1996), including hydraulic conductivity, evapotranspiration, and recharge rate, and used the model to compute the effect on continued withdrawals on water levels in the Lea County Underground Water Basin to the year 2040. *See* Tr. at 1315-16. He first checked his input and the code by running it with the State’s input and reproduced the 1996 and 2040 results for drawdown and saturated water depth given in the State’s report. *See id.* He then modeled the additional water withdrawal from a node representing the Hobbs well field attributed to usage by the proposed NEF for 2010 and 2040, and found that 30 years of water withdrawn for NEF usage would result in 1.2 feet of additional drawdown locally at the Hobbs well field. *See* Tr. at 1316. According to Mr. Toblin’s testimony, these computations indicate that the remaining saturated thickness at Hobbs in the year 2040 would be reduced from approximately 38.2 feet without NEF usage to approximately 37 feet with NEF usage, and that the effect would decrease materially with distance from the withdrawal point, so that at approximately 2 miles away from that point, the differential would be only approximately 0.1 feet. *See id.*

4.64 In his oral rebuttal testimony, NIRS/PC witness Rice argued that he could not evaluate the accuracy of these computations because, although he had access to the model, he did not have access to backup data accompanying Mr.

Toblin's computations or his input/output files. *See* Tr. at 1374-75. Without giving any weight to the foregoing computations, we find the evidence before us clearly establishes that the effects of the additional NEF-related water withdrawal are de minimis when compared with any relevant water resource, rights, or usage. Because the Board reaches this conclusion without regard to the Staff's computations, we need not address the merits of the challenge to this testimony posed by the oral rebuttal testimony of NIRS/PC witness Rice or the additional argument put forth by the Staff, i.e., that because the alleged omission was cured and NIRS/PC made no proper formal effort to amend their contention, this particular challenge is moot.

4.65 Sections 4.2.6.3, 4.3.6, and 4.4.3 of the DEIS set forth the Staff's full evaluation of potential impacts of construction, operation, and decommissioning of the proposed NEF on water supplies in Lea County. *See* Tr. at 1314; NEF DEIS at 4-14 to 4-15, 4-62, 4-66. Mr. Toblin testified that the Staff finds such impacts to be small. *See* Tr. at 1314. In this regard, he testified that NEF average water use would amount to only 0.26% of the combined capacity of the Hobbs and Eunice municipal water systems and that the total projected NEF water use over the life of the facility would consume only 0.004% of the Ogallala Aquifer's reserves within the State of New Mexico. *See* Tr. at 1315.

4.66 Based upon the foregoing, and the testimony and evidence in the record before the Board, we find that there is no credible qualitative or quantitative evidence to support this NIRS/PC contention in that (1) the ER contains an adequate assessment of the potential environmental impacts of the proposed project upon water supplies in the area of the project; and (2) the Staff has adequately shown in the DEIS how this pumpage would affect water levels and the long-term productivity of the Hobbs well field or the Lea County Underground Water Basin.<sup>8</sup>

### **C. Findings Regarding Contention NIRS/PC EC-4**

4.67 As admitted by the Licensing Board in its July 19 memorandum and order, *see* LBP-04-14, 60 NRC at 67-68, and modified by its November 22 ruling on late-filed contentions, *see* November Late-Filing Ruling at 14-15, contention NIRS/PC EC-4 reads:

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<sup>8</sup> Although NIRS/PC assert that additional impact analysis is required by the "uninterruptable" nature of LES's water supply needs that potentially will require water use curtailment by other users, *see* NIRS/PC Reply Findings at 20, we find this unpersuasive as a basis for declaring the DEIS inadequate given (1) that LES has no priority user status with either the City of Hobbs or the City of Eunice, *see* Tr. at 1303-05; and (2) the de minimis nature of the LES water usage, particularly when compared to what are other much larger, but apparently deferrable, water usages in the local area, *see* Tr. at 1284.

NIRS/PC EC-4 — IMPACTS OF WASTE STORAGE

CONTENTION: Petitioners contend that the Louisiana Energy Services, L.P. Environmental Report (ER) lacks adequate information to make an informed licensing judgement, contrary to the requirements of 10 C.F.R. Part 51. The ER fails to discuss the environmental impacts of construction and lifetime operation of a conversion plant for the Depleted Uranium Hexafluoride (“UF<sub>6</sub>”) waste that is required in conjunction with the proposed enrichment plant.

The DEIS fails to discuss the environmental impacts of the construction and operation of a conversion plant for the depleted uranium hexafluoride waste. The DEIS entirely relies upon final EISs issued in connection with the construction of two conversion plants at Paducah, Kentucky, and Portsmouth, Ohio, that will convert the Department of Energy’s inventory of depleted uranium (DEIS at 2-28, 2-30, 4-53, 4-54). Such reliance is erroneous, because the DOE plants are unlike the private conversion plant contemplated by LES.

4.68 Each of the parties presented witnesses with regard to contention NIRS/PC EC-4, each of whom submitted written direct and rebuttal testimony for the record and gave oral testimony at the evidentiary hearing. *See* Tr. at 873-1168. For its part, LES presented two witnesses in support of the NEF application relative to this contention, Rod M. Krich, Vice President of Licensing, Safety, and Nuclear Engineering for LES and Vice President, Licensing Projects for Exelon Nuclear, *see* Tr. at 885; and Paul Schneider, a technical management consultant working for SMG, Inc., a consulting services company, and retained as an expert consultant by LES, *see* Tr. at 907-08.

4.69 Mr. Krich’s background and professional qualifications are described above in connection with his testimony on NIRS/PC EC-2. *See supra* p. 421. Mr. Schneider received a Bachelor of Science in Physics and Mathematics from Wake Forest University, a Master of Science degree in Physics from Emory University, and has over 40 years of experience in the nuclear industry, including in the design of chemical processing plants to convert depleted uranium hexafluoride to uranium oxide and a fluoride byproduct. *See* Tr. at 908. LES retained Mr. Schneider as an expert consultant to assist in evaluating issues associated with the environmental impacts of deconverting DUF<sub>6</sub> to U<sub>3</sub>O<sub>8</sub>. *See* Tr. at 907-08. Based on the foregoing, the prior discussion of Mr. Krich’s background and qualifications, and the subject matter of this contention, the Board finds that Mr. Krich and Mr. Schneider are each qualified to testify as an expert witness on the subject of the impacts of waste storage at the NEF site.

4.70 The Staff presented one witness, Dr. Donald E. Palmrose, Senior Nuclear Safety Engineer with Advanced Technologies and Laboratories International, Inc. (ATL), a technical contractor for the NRC. *See* Tr. at 996. Dr. Palmrose received a Bachelor of Science in Nuclear Engineering from Oregon State University, and a Master of Science and Ph.D. in Nuclear Engineering from

Texas A&M University. *See* Tr. at 1008. In his position at ATL, Dr. Palmrose managed a team of engineers, consultants, and support personnel in the development of the NEF DEIS, particularly with regard to those sections concerning public and occupational health impacts, and waste management impacts including disposition of depleted uranium. *See* Tr. at 996-97. Based on the foregoing, the Board finds that Dr. Palmrose is qualified to testify as an expert witness on the subject of the impacts of waste storage at the NEF site.

4.71 Finally, NIRS/PC presented one witness, Dr. Arjun Makhijani, President of the Institute for Energy and Environmental Research, an organization that assesses environmental damage from nuclear fuel facility operations and estimates those facilities' compliance with environmental regulations. *See* Tr. at 1064. Dr. Makhijani received a Bachelor of Engineering Degree from the University of Bombay in Bombay, India, a Master of Science in Electrical Engineering from Washington State University, and a Ph.D. in Electrical Engineering from the University of California, Berkeley. *See* Tr. at 1080. He has authored or co-authored many studies, articles, and books on nuclear-related issues, including nuclear fuel cycle-related issues and nuclear waste. *See* Tr. at 1065. In preparation for his testimony, Dr. Makhijani reviewed relevant portions of the NEF application and the DEIS, as well as several supporting documents. *See* Tr. at 1066-68. Based on the foregoing, the Board finds that Dr. Makhijani is qualified to testify as an expert witness on the subject of the impacts of waste storage at the NEF site.

4.72 The NEF's proposed gas centrifuge enrichment process will produce as a byproduct  $\text{DUF}_6$ , which LES will need to dispose of prior to decommissioning the NEF. *See* NEF DEIS at 2-27. Prior to decommissioning, the NEF will convert the  $\text{DUF}_6$  to a more stable form suitable for disposal. *See id.* at 2-27 to 2-28. This conversion, commonly referred to as "deconversion," will be performed at a separate facility through an as-yet-unselected chemical process by which the  $\text{DUF}_6$  will be treated to produce aqueous hydrofluoric acid (HF). *See* Tr. at 1001. One such chemical deconversion method involves using lime to neutralize the HF to produce calcium fluoride ( $\text{CaF}_2$ ) for disposal or sale; another converts the  $\text{DUF}_6$  to anhydrous HF through a process involving distillation. *See id.*

4.73 Because deconversion is necessary and foreseeable, the environmental impacts of such a process must be considered as part of the Staff's NEPA review. At the time LES submitted its application to the NRC and, indeed, even at the time prefiled testimony was prepared for submission in this proceeding, LES left open the question of whether it would convert the  $\text{DUF}_6$  to  $\text{CaF}_2$  or distill it to create anhydrous HF. *See* Tr. at 912-13. At the evidentiary hearing on this contention, however, LES represented and committed to amend the NEF license application to reflect that anhydrous HF will not be employed at a deconversion facility selected for deconversion of  $\text{DUF}_6$  generated at the proposed NEF. *See* Tr. at 932-34. Specifically, Mr. Krich stated under oath during the hearing that LES (1) was "willing to put into the license application [LES's] commitment not

to use the anhydrous hydrofluoric acid option''; (2) would put terms into any contract with a deconversion vendor that would give LES an enforceable right to ensure that the anhydrous HF process was not used; and (3) accepted that this commitment would form the basis of a condition on the license. *See* Tr. at 933-34. In fact, LES has since submitted a license amendment to that effect, a submission of which we take judicial notice. *See* NEF SAR at 10.3-2 (ADAMS Accession No. ML050750070).

4.74 As reflected in Dr. Makhijani's testimony, the focus of contention NIRS/PC EC-4 was upon the adequacy of the ER and DEIS analyses of deconversion of  $\text{DUF}_6$  utilizing a process that will produce anhydrous HF, including lack of analysis of anhydrous HF generation process; lack of analysis of any process other than deconversion of  $\text{DUF}_6$  to  $\text{U}_3\text{O}_8$ ; assumed use of a deconversion process that generates  $\text{CaF}_2$  as a byproduct; lack of analysis of off-normal or accident conditions; and lack of analysis of transportation impacts. *See, e.g.*, Tr. at 1068-79, 1101-06. Also raised by NIRS/PC were related questions regarding (1) ER and DEIS incorporation of the DOE PEIS regarding  $\text{DUF}_6$  deconversion and disposal and the FEISs for DOE  $\text{DUF}_6$  conversion facilities currently being constructed at Paducah, Kentucky, and Portsmouth, Ohio; and (2) reliance on the Claiborne Enrichment Center FEIS. *See, e.g.*, Tr. at 958-72. Although, as is noted above, LES has since amended its license application to reflect that anhydrous HF will not be employed at any facility selected for deconversion of  $\text{DUF}_6$  generated at the NEF, raising the possibility it is no longer reasonably foreseeable that anhydrous HF will need to be managed when the  $\text{DUF}_6$  produced by the proposed NEF is converted, the Board nonetheless has considered that option as it assessed the adequacy of the NEPA analysis in connection with this contention.

#### ***1. Staff Reliance on DOE Environmental Impact Statements***

4.75 The Staff is required to perform its own independent NEPA analysis and, as noted above, *see supra* paragraphs 3.6 to 3.7, although it may glean information from the ER, the ultimate responsibility for NEPA compliance rests with the Staff. Section 2.1.9 of the NEF DEIS discusses environmental impacts associated with the various alternative processes for deconversion of  $\text{DUF}_6$  to  $\text{U}_3\text{O}_8$  and subsequent disposal of that waste. *See* NEF DEIS at 2-27 to 2-33. Specifically, the DEIS considers deconversion at a yet-to-be-constructed private sector facility, *see id.* at 2-29 to 2-30, or possible transport of the  $\text{DUF}_6$  to either of two DOE facilities currently being constructed at Paducah, Kentucky, and Portsmouth, Ohio, for deconversion and disposal. *See id.* at 2-31 to 2-33. DEIS chapter 4 presents the Staff's evaluation of potential environmental impacts associated with the construction, operation, and decommissioning of the proposed NEF, and section 4.2.14.3 specifically addresses environmental impacts of  $\text{DUF}_6$  waste management. *See id.* at 4-52 to 4-59. This analysis covers a range of storage

possibilities, from temporary onsite storage at the proposed NEF to use of the private or DOE options for deconversion. *See id.* at 4-53 to 4-56.

4.76 Following these analyses, the Staff concluded in the DEIS that (1) the potential environmental impacts of the DUF<sub>6</sub> waste management option utilizing temporary onsite storage at the proposed NEF would be small to moderate, *see id.* at 4-53; (2) the potential environmental impacts of use of a private deconversion facility would be small, *see id.* at 4-54; (3) the impacts from use of a private deconversion facility adjacent to the NEF would be small, *see id.* at 4-55; and (4) additional environmental impacts from converting the DUF<sub>6</sub> at offsite DOE facilities, such as Paducah or Portsmouth, would be small, *see id.* at 4-57.

4.77 Dr. Palmrose testified for the Staff that his review in the DEIS of the impacts of deconversion relied in large part on examination of three environmental impact statements prepared by DOE that related to the DUF<sub>6</sub> deconversion facilities at Paducah and Portsmouth: the Paducah FEIS, the Portsmouth FEIS, and a Programmatic Environmental Impact Statement (PEIS) prepared by DOE in developing a strategy for managing DUF<sub>6</sub>. *See Tr.* at 1000; *see also* LES Exh. 17 (Final Environmental Impact Statement for the Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Paducah, Kentucky Site, DOE/EIS-0359, Oak Ridge Operations, DOE Office of Environmental Management (June 2004)) [hereinafter Paducah FEIS]; LES Exh. 16 (Final Environmental Impact Statement for Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Portsmouth, Ohio Site, DOE/EIS-0360, Oak Ridge Operations, DOE Office of Environmental Management (June 2004)) [hereinafter Portsmouth FEIS]; LES Exh. 18 (Final Programmatic Environmental Impact Statement for Alternative Strategies for the Long-Term Management and Use of Depleted Uranium Hexafluoride, DOE/EIS-0269, DOE Office of Nuclear Energy, Science and Technology (April 1999)) [hereinafter PEIS].

4.78 Specifically, Dr. Palmrose reviewed the impacts presented in the DOE documents and, based on his past experience and his review of the assumptions and the information available in those documents, *see Tr.* at 1027-28, concluded that DOE had provided a reasonable assessment of the impacts of deconversion of DUF<sub>6</sub> to U<sub>3</sub>O<sub>8</sub>, *see Tr.* at 1044. In addition, in the hearing notice for this proceeding, the Commission indicated that, relative to the environmental impacts associated with the management of DUF<sub>6</sub>, it was appropriate for the Staff to consider DOE EIS analysis. *See* CLI-04-3, 59 NRC at 22. Based on the foregoing, the Board finds that the Staff appropriately relied upon and incorporated portions of the analyses from the DOE EIS documents into the NEF DEIS.

## **2. Adequacy of DOE EISs Regarding Deconversion Facility Impacts**

4.79 As an initial matter, Dr. Palmrose testified for the Staff that, with regard to the PEIS, the potential environmental impacts of three deconversion options

examined in that document were not site-specific because the location of a DOE deconversion facility would not be determined until some later date after DOE had decided whether to construct a deconversion facility. *See* Tr. at 1000-01. He noted, however, that both the site-specific Paducah and Portsmouth FEISs prepared by DOE incorporate by reference the PEIS. *See* Tr. at 1004; *see also* Tr. at 991, Portsmouth FEIS at S-13; Paducah FEIS at S-13.

4.80 Dr. Palmrose further testified that in Appendix F to the PEIS, DOE evaluated the environmental impacts of three options: deconversion to  $U_3O_8$ , deconversion to  $UO_2$ , and deconversion to metal. *See* Tr. at 1000; PEIS at F-2. Moreover, with regard to the first option, Dr. Palmrose noted that DOE considered the effects of the processes for managing the concentrated aqueous HF produced by that deconversion method, i.e., neutralization with lime to produce  $CaF_2$  and distillation to produce anhydrous HF, the second of which is the process of concern to NIRS/PC. *See* Tr. at 1001; PEIS at F-11 to F-12. Dr. Palmrose noted that DOE, while concluding that for most PEIS-analyzed environmental areas, environmental impacts would be the same no matter which of these options was selected for treatment of the aqueous HF, focused on significant impacts of the deconversion processes, which did not always involve the use of anhydrous HF. *See* Tr. at 1002.

4.81 Dr. Palmrose testified that the PEIS examined a broad range of environmental impacts regarding the construction and operation of a deconversion facility, which, in the Board's view, likewise are relevant to an evaluation of the environmental impacts of the proposed NEF facility. Specifically, DOE discussed in the PEIS effects on human health during normal operations and from accidents; impacts on air quality, water, and soil; socioeconomic impacts; ecological impacts; waste management; resource requirements; land use; and transportation. *See id.* Dr. Palmrose further testified that DOE found that deconversion to  $U_3O_8$  would result in an average radiation exposure of about 300 millirem (mrem) per year to involved workers, and less than 0.01 mrem per year for noninvolved workers and members of the public, based on normal operations. *See id.* The PEIS concluded that (1) because of the similarity of the processes, the airborne emission rates of uranium compounds and the material handling activities would be expected to vary only slightly among these processes, resulting in similar radiological impacts; (2) total transportation risks associated with  $DUF_6$  deconversion would be low for all three deconversion processes and associated management of HF; and (3) no adverse chemical health effects would be expected during normal operations. *See* Tr. at 1002-03; *see also* PEIS at F-16, F-21, J-27.

4.82 Dr. Palmrose testified that the PEIS also "examined a range of accidents from high-frequency/low-consequence to low-frequency/high-consequence accidents and noted the results for radiological and chemical health impacts for the highest-consequence accident in each frequency category." Tr. at 1002; *see also* PEIS at F-23 to F-37. In so doing, DOE concluded that the maximum risk



values would be less than one person injured for all accidents studied, except impact to workers from corroded cylinder spills (wet or dry conditions) and ammonia stripper overpressure. *See* Tr. at 1002; PEIS at F-36. According to Dr. Palmrose's testimony, the PEIS found that impacts due to chemical overexposure from HF-related rail transportation accidents could result in an overall risk to the public (defined as the product of the accident consequence and the probability over the duration of the program) of one permanent physical injury or fatality. *See* Tr. at 1003; PEIS at J-28. In addition, while a postulated accident involving anhydrous HF could have releases, the PEIS concluded that rapid mitigation and the small volume of released contaminants would result in negligible impacts. *See* Tr. at 1003; *see also* PEIS at F-47, F-50, F-52.

4.83 Dr. Palmrose then testified that other potential impacts considered by the PEIS included impacts on cultural resources, environmental justice, visual impacts, recreational resources, noise levels, and impacts of decontamination and decommissioning. *See* Tr. at 1003-04. Dr. Palmrose noted, however, that these impacts were not analyzed in detail in the PEIS because they require consideration of specific sites, which the PEIS did not explore. *See id.*; *see also* PEIS at F-72. Finally, Dr. Palmrose testified DOE concluded in the PEIS that there were lower potential impacts from physical hazards from deconversion to  $U_3O_8$  as compared to other deconversion options (e.g., to  $UO_2$ ), and that there are essentially no differences between HF management options. *See* Tr. at 1002-03; PEIS at F-37.

4.84 Dr. Palmrose further testified that although the PEIS explored the impacts of the anhydrous HF deconversion process, the FEISs prepared for the Paducah and Portsmouth facilities did not specifically discuss that option because DOE selected conversion to  $CaF_2$  as the process for those facilities. *See* Tr. at 1004. With regard to the NRC's reliance on the DOE FEISs in developing the NEF DEIS, however, Dr. Palmrose testified he believed the impacts for private deconversion of  $DUF_6$  to  $U_3O_8$  would be bounded by (i.e., similar to or less than) those for the Paducah and Portsmouth facilities, and therefore used the values from the DOE analyses in reaching his conclusions regarding the anticipated environmental impacts from a private facility in section 4.2.14.3 of the DEIS. *See* Tr. at 1005, 1042.

4.85 Also with regard to the anhydrous technology, Dr. Palmrose testified that besides the fact no current deconversion facility uses the anhydrous technology, (1) there is no current plan to construct such a facility; (2) the process used to distill HF to an anhydrous form has not been fully developed and any assessment of the impacts resulting from distillation would have a high degree of uncertainty; and (3) any analysis would have to be derived from the evaluation of similar technologies. *See* Tr. at 1006. Furthermore, from the perspective of trying to develop a reasonable study of alternatives, Dr. Palmrose pointed out that specific analyses of the impacts from the neutralization process are contained in the Paducah, Kentucky, and Portsmouth, Ohio FEISs in which DOE presented

analyses relying on data from similar technologies and presented a range of impacts designed to provide a reasonable estimate of their magnitude, taking into account the uncertainty relative to the specific technology and site. *See id.*; PEIS at F-4. Given these uncertainties and based on current knowledge, Dr. Palmrose thus concluded the analysis performed by DOE in the PEIS that he reviewed in preparing the DEIS presented a thorough critique of impacts of a deconversion facility that would be using an as-yet-to-be commercially established distillation process to produce anhydrous HF, and that any more specific analysis would require knowledge of the particular processes that would be used to perform the distillation process and the specific site at which the facility would be constructed. *See Tr.* at 1006-07. While acknowledging he would not be able to address the impacts of an anhydrous HF deconversion process with the same degree of specificity used in the DEIS regarding the  $\text{CaF}_2$  deconversion process, given the uncertainty that exists relative to the anhydrous HF deconversion process because it is not a fully developed technology, he considered the PEIS analysis that relied on data from similar technologies to be a thorough, adequate assessment of the impacts of that process. *See Tr.* at 1005-07.

4.86 During his testimony on behalf of LES, while noting that if during his review of these DOE analyses on behalf of LES he found conclusions that appeared to be out of line he would inquire of the author or conduct his own analysis, *see Tr.* at 971, Mr. Krich further declared that he generally agreed with the Staff conclusions regarding the adequacy of, and the propriety of relying on, the DOE EISs. Specifically, he declared that (1) the PEIS and the two site-specific EISs for Paducah and Portsmouth contain a comprehensive evaluation of the environmental impacts of construction, operation, and decommissioning of those facilities; (2) these EISs appropriately address and bound the environmental effects that might be associated with construction, operation, and decommissioning of a private sector deconversion facility as NEF contemplates such an option, particularly as the environmental evaluation made in the PEIS was for a facility with four times the capacity needed for processing NEF  $\text{DUF}_6$ ; (3) DOE's PEIS comprehensively evaluated all relevant environmental impacts that might be associated with constructing, operating, and decommissioning a deconversion facility; and (4) DOE's PEIS had a comprehensive evaluation of the environmental effects of transportation of the  $\text{DUF}_6$  cylinders and the deconversion product  $\text{U}_3\text{O}_8$ , as well as the chemicals associated with the processes involved. *See Tr.* at 893-97. Mr. Krich further noted that if a private deconversion facility were to be located in the vicinity of the NEF, the population density in the area would be less than one-fifth of that considered in the DOE PEIS, which DOE had determined to be representative of potential sites for a deconversion facility. *See Tr.* at 895.

### **3. Other Items Regarding Anhydrous HF Deconversion Process**

4.87 Dr. Makhijani also testified for NIRS/PC regarding his concern that HF filter technology used in the deconversion process may not be as efficient as assumed in the DOE PEIS and FEISs and, therefore, the impacts of lower filter efficiency should be considered. *See* Tr. at 1077. Upon cross-examination, however, Dr. Makhijani acknowledged he had no current information and was not expert in that topic area. *See* Tr. at 1156-57. By contrast, Mr. Schneider testified for LES that (1) the study to which Dr. Makhijani referred in his testimony regarding filter technology has no applicability to the HF filter system that would be utilized by a deconversion facility, (2) the plant of concern to NIRS/PC was constructed more than 50 years ago, and (3) filter technology had materially improved in the intervening years. *See* Tr. at 915-17.

4.88 Finally, Dr. Makhijani raised questions about the DEIS consideration of transportation matters, including transportation routes; the chemicals being shipped on those routes, in particular anhydrous ammonia; and possible transportation accidents, including the July 2001 train fire in Baltimore, Maryland, and the January 2005 Graniteville, South Carolina rail accident involving a chlorine gas release. *See* Tr. at 1105-06, 1135-37. Yet, as Dr. Makhijani acknowledged, the transportation route issue, which was originally framed in terms of transportation distances, was one DOE had already considered. *See* Tr. at 1136-37. Further, with regard to chemical shipments, while the PEIS contains a discussion of ammonia transportation, as Dr. Makhijani also acknowledged, *see* Tr. at 1158-59; *see also* PEIS at J-10 to J-12, the site-specific DOE EISs consider the issue of transporting anhydrous ammonia and, in fact, analyze a larger number of shipments than the PEIS, *compare, e.g.*, Paducah FEIS at 2-33, 5-71 *with* PEIS at 5-47. And with regard to transportation accidents, in addition to the PEIS analysis of normal operations and accident conditions, *see* Tr. at 898, the PEIS did analyze a severe accident regarding a railcar release of anhydrous HF in an urban area, *see* PEIS at 5-49 (in addition to 300 fatalities, 30,000 persons might experience irreversible adverse effects).

### **4. Board Findings**

4.89 As we noted in paragraph 4.73, although LES has now firmly committed not to use the anhydrous process, the Board nonetheless has considered that option for the purpose of determining the adequacy of the NEPA analysis in connection with this contention. Indeed, Dr. Makhijani's principal focus with regard to this contention was his criticism that neither the ER nor the DEIS addresses the environmental impacts of the deconversion processes, and in particular that involving anhydrous HF. *See, e.g.*, Tr. at 1071-76, 1101-04. In contrast, Mr. Krich testified for LES that DOE thoroughly investigated those processes in its

PEIS, incorporated by reference into the Paducah and Portsmouth FEISs and subsequently into the ER and DEIS,<sup>9</sup> *see* Tr. at 896-97, 912, and Dr. Palmrose agreed with that assessment, *see* Tr. at 1006-07.

4.90 In this regard, Dr. Palmrose noted that the PEIS contains an analysis of the deconversion options of  $U_3O_8$  deconversion, deconversion to  $UO_2$ , and deconversion to metal. *See* Tr. at 1000; PEIS at F-2. Moreover, although he noted that the specific analysis of  $U_3O_8$  deconversion impacts in the Paducah and Portsmouth FEISs contains only an analysis of the  $CaF_2$  neutralization process, with no current deconversion facility using the anhydrous HF distillation technology and no current plan to construct such a facility, he believes that any assessment of the impacts resulting from the distillation process would have a high degree of uncertainty and would have to be derived from the evaluation of similar technologies. *See* Tr. at 1006. Dr. Palmrose also pointed out that just this type of analysis was done by DOE in the PEIS, presenting a range of impacts designed to provide a reasonable estimate of their magnitude, taking into account the uncertainty relative to the specific technology and site. *See* Tr. at 1006; PEIS at F-4. Given these uncertainties, and based on current knowledge, Dr. Palmrose concluded that the analysis performed by DOE in the PEIS presented a thorough analysis of impacts of a deconversion facility using an as-yet-to-be commercially established distillation process to produce anhydrous HF. *See* Tr. at 1006-07.

4.91 Based upon the testimony and other evidence in the record before it, the Board finds the Staff has adequately considered and presented in the DEIS the environmental impacts reasonably associated with construction and lifetime operation of a  $U_3O_8$  conversion plant for the  $DUF_6$  waste required in conjunction with the proposed enrichment plant. In addition, notwithstanding LES's commitment to not use an anhydrous HF process (which the Board assumes will be a condition of any license that might eventually be issued in this proceeding<sup>10</sup>), based on the testimony of Dr. Palmrose as it supplemented the Staff DEIS, the Board finds sufficient information exists to demonstrate there has been adequate consideration of the impacts of the management of anhydrous HF. Further, in the absence of technical support for his concern, the Board finds no

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<sup>9</sup> Also relative to the NIRS/PC assertion that the initial license application for the NEF does not address the impacts of a deconversion facility, NIRS/PC did acknowledge that Revision 2 of the application does reference environmental impact evaluations of a proposed  $DUF_6$  deconversion facility conducted by the NRC in the Claiborne Enrichment Center (CEC) FEIS, and DOE's evaluations contained in the Paducah, Kentucky, and Portsmouth, Ohio deconversion facility EISs. *See* Tr. at 1068. This purported omission was cured by the amendment referencing the NRC's CEC FEIS and the two DOE EISs which, in turn, incorporate by reference the PEIS.

<sup>10</sup> In light of the clear record before us of LES's unequivocal, sworn commitment to a non-anhydrous HF process, the Board believes it is unnecessary to direct the imposition of a license condition to that effect, leaving it to the Staff to ensure that this LES obligation is appropriately incorporated into any licensing document that might be issued to LES if it ultimately is successful in this proceeding.

merit to Dr. Makhijani's claims regarding filter technology. Nor does the Board find that the evidentiary record provides a basis for the NIRS/PC concerns about the adequacy of the DEIS transportation analysis given the bounding analyses of accidents and ammonia transportation in the DOE PEIS and/or site-specific FEISs. Moreover, as was noted on the record, the licensing process for any private sector deconversion facility would require the cognizant regulatory entity to conduct an appropriate evaluation of site-specific impacts, presumably including an analysis of potential transportation routes, *see* Tr. at 894.

4.92 Accordingly, the Board concludes that relative to the matters raised by NIRS/PC in connection with its contention EC-4, the Staff's analysis, as supplemented by the testimony and evidence submitted in this proceeding, meets the requirements of NEPA in that it adequately discusses the environmental impacts of construction and lifetime operation of a conversion plant for the DUF<sub>6</sub> waste that is required in conjunction with the proposed enrichment plant.

#### **D. Findings Regarding Contention NIRS/PC EC-7**

4.93 As admitted by the Licensing Board in its July 19 memorandum and order, *see* LBP-04-14, 60 NRC at 69-70, contention NIRS/PC EC-7 reads:

##### NIRS/PC EC-7 — NEED FOR THE FACILITY

CONTENTION: Petitioners contend that the Environmental Report (ER) does not adequately describe or weigh the environmental, social, and economic impacts and costs of operating the National Enrichment Facility (*See* ER 1.1.1 et seq.) in that:

- (A) Louisiana Energy Services, L.P.'s (LES) presentation erroneously assumes that there is a shortage of enrichment capacity.
- (B) LES's statements of "need" for the LES plant (ER 1.1) depend primarily upon global projections of need rather than projections of need for enrichment services in the U.S.
- (C) LES has referred to supply and demand in the uranium enrichment market (ER 1.1), but it has not shown how LES would effectively enter this market in the face of existing and anticipated competitors and contribute some public benefit.

4.94 Thus, at issue in connection with this contention are three distinct, narrow questions: (1) does the ER incorrectly assume a "shortage of enrichment capacity"; (2) does the LES projected need for enrichment services "depend primarily upon global projections . . . rather than [domestic] projections"; and (3) has LES demonstrated how it will effectively enter the enrichment services market?

4.95 In addressing these matters, LES, the Staff, and Intervenors NIRS/PC presented witnesses, each of whom submitted written direct and rebuttal testimony for the record and gave oral testimony at the evidentiary hearing. *See* Tr. at 1381-1692. Applicant LES presented three witnesses with regard to this contention: (1) Kirk S. Schnoebelen, Marketing Manager for Urenco, Inc., *see* Tr. at 1389; (2) Michael H. Schwartz, Chairman of the Board of Energy Resources International, Inc. (ERI), a Washington, D.C. consulting firm, *see* Tr. at 1431; and (3) Rod M. Krich, Vice President of Licensing, Safety and Nuclear Engineering for LES and Vice President, Licensing Projects for Exelon Nuclear, *see* Tr. at 1433-34.

4.96 Mr. Schnoebelen holds a Bachelor of Science degree and Master of Science degree in Nuclear Engineering from the University of Wisconsin, Madison, and a Master of Business Administration degree from the University of Minnesota. *See* Tr. at 1389. He has more than 20 years of experience in the nuclear industry, including as a nuclear engineer and as a purchaser and seller of enrichment services. *See* Tr. at 1389-90. In his position with Urenco, Inc., Mr. Schnoebelen is responsible for the marketing and sale of uranium enrichment services to United States utilities for both Urenco Enrichment Company and LES. *See* Tr. at 1389. Based on the foregoing, the Board finds that Mr. Schnoebelen is qualified to testify as an expert witness on the subject of the need for the NEF.

4.97 Mr. Schwartz received both a Bachelor of Science in Engineering, Nuclear Engineering and a Master of Science in Engineering, Nuclear Engineering from the University of Michigan, is a registered Professional Engineer in the District of Columbia and California, and has been a consultant on nuclear fuel cycle issues for more than 25 years. *See* Tr. at 1432-33. As Chairman of the Board at ERI, a firm that provides energy and resource consulting services to electric utilities, private industry, institutions and associations, and government agencies, Mr. Schwartz oversees all consulting services, including those related to nuclear fuel supply and management, uranium enrichment and conversion, and spent fuel storage. *See* Tr. at 1431-32. He also has involvement in activities associated with analysis of the domestic and global markets for uranium enrichment services. *See* Tr. at 1432. Pursuant to a technical assistance contract with LES, Mr. Schwartz oversaw ERI's preparation of a market analysis of uranium enrichment supply and requirements. *See* Tr. at 1433. Based on the foregoing, the Board finds that Mr. Schwartz is qualified to testify as an expert witness on the subject of the need for the NEF.

4.98 Mr. Krich's background and qualifications are discussed at length with regard to contention EC-2, *see supra* p. 421. Based on that discussion and the subject matter at hand here, the Board finds that Mr. Krich is qualified to testify as an expert witness on the subject of the need for the NEF.

4.99 The NRC Staff presented one witness, Rick Nevin, Vice President with IFC Consulting. *See* Tr. at 1541-42. Mr. Nevin has a Bachelor of Arts in Economics and Mathematics and a Master of Arts in Economics, both from

Boston University, and a Masters in Management with concentrations in Finance, Managerial Economics, and Strategy from Northwestern University. *See* Tr. at 1541. As a consultant at IFC, Mr. Nevin has provided financial, economic, and environmental risk analysis for several government agencies, including the NRC. *See id.* Neither Mr. Nevin nor IFC had any part in the preparation of the NEF DEIS, but Mr. Nevin reviewed the relevant portions of the ER, the NEF DEIS, sources cited in both documents, and additional information relating to the domestic and global market for uranium enrichment services in preparation for his testimony. *See* Tr. at 1542. Based on the foregoing, the Board finds that Mr. Nevin is qualified to testify as an expert witness on the subject of the need for the NEF.

4.100 Finally, NIRS/PC presented one witness in support of this contention, Michael F. Sheehan, a partner in the firm of Osterberg & Sheehan, Public Utility Economists. *See* Tr. at 1581. Dr. Sheehan holds a Bachelor of Science, a Master of Arts, and a Ph.D. in Economics from the University of California at Riverside, and a Juris Doctor degree from the University of Iowa College of Law. *See id.* He has taught courses in economics, environmental policy and planning, public utility policy and planning, and local energy planning, among others, at both the undergraduate and graduate level, and has more than 20 years of experience in environmental planning and regulation. *See* Tr. at 1581-82. Dr. Sheehan has also provided testimony on issues related to utility planning and regulation and energy management before numerous state agencies, and has submitted testimony to the NRC on three prior occasions regarding issues including financial capability, cost benefit, and need. *See* Tr. at 1582-84. In preparation for his testimony with regard to contention EC-7, he reviewed the relevant portions of the NEF application, NEF DEIS, NRC rules, and other discovery materials. *See* Tr. at 1584-85. Based on the foregoing, the Board finds that Dr. Sheehan is qualified to testify as an expert witness on the subject of the need for the NEF.

4.101 The scope of this contention, and therefore the Board's analysis of the testimony and evidence, is in material part governed by what it does not cover. In considering the admission of this contention and proposed amendments to it, the Board has held that LES is not required under NEPA to present a business plan, to make its "business case," or to demonstrate the profitability of its proposed facility, nor is it under any obligation to provide detailed market analysis. *See* LBP-04-14, 60 NRC at 69-70; November Late-Filing Ruling at 17-18. Therefore, the Board's inquiry relative to this contention does not address any matters associated with the projected cost of supplying enrichment services, or the potential prices that might be paid for those services. Rather, the Board's inquiry focused upon the projected demand (based on current operating and anticipated

new reactors) and the expected supply based upon the actual commitments or statements of the parties involved in supply production.<sup>11</sup>

### ***1. Analysis of Uranium Enrichment Capacity***

4.102 To determine whether there is a “shortage” of enrichment capacity requires an examination of the demand for and supply of such capacity. In analyzing the potential demand, LES made an extensive examination and analysis of both the worldwide expected installed nuclear capacity and the related demand for enrichment services. *See* LES Exh. 30, at 1.1-4 to 1.1-7 (LES, National Enrichment Facility Environmental Report §§ 1.1.1 to 1.1.3, Tables 1.1-1 to 1.1-8, Figs. 1.1-1 to 1.1-8 (2004)) [hereinafter ER Purpose and Need]. Dr. Sheehan testified on cross-examination that the analyses relied on by LES were “accepted in the community” and were “reasonable to be relied upon in this context,” and he did not take issue with either of the two demand projections relied upon by LES in its ER. *See* Tr. at 1668-69. In addition, the analyses performed for LES by ERI forecast trends in United States nuclear generating capacity, *see, e.g.*, Tr. at 1443-44, 1446-49, and the ER includes a forecast of United States uranium enrichment requirements, *see* ER Purpose and Need, Table 1.1-3. As a consequence, the Board finds the projected demand side of the supply-demand analysis has been reasonably estimated relative to the matters at issue here.

4.103 In assessing supply, several key issues have been presented to the Board, including: (1) will USEC, Inc. (USEC), shut down its gaseous diffusion uranium enrichment plant and, if so, when; (2) for how long will the High Enriched Uranium (HEU) Agreement between the United States and Russia continue to be a source of enriched materials; and (3) what is the projected market demand for enrichment services from the NEF?

4.104 The only current domestic supplier of enrichment services in the United States is the USEC Gaseous Diffusion Plant (GDP) in Paducah, Kentucky, *see* Tr. at 1461, but USEC has announced plans to cease enrichment services production at its Paducah GDP when its proposed American Centrifuge Plant (ACP) becomes operational, *see id.*; *see also* ER Purpose and Need, Table 1.1-5; LES Exh. 64 (USEC, Environmental Report for the American Centrifuge Plant in Piketon, Ohio (Aug. 2004)). In fact, USEC already has ceased operations at its other GDP in Portsmouth, Ohio. *See* NEF DEIS at 1-3.

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<sup>11</sup> Also in connection with the scope of contention NIRS/PC EC-7, we note that the Staff proffered Mr. Nevin as its supporting witness regarding this issue statement, and we have found that by reason of his training and experience he could be considered an expert relative to its subject matter. Nonetheless, given his admitted lack of involvement in reviewing the LES ER for the purpose of preparing the DEIS or, indeed, in any aspect of DEIS development, *see* Tr. at 1542, it is not apparent what, if any, relevant or otherwise useful insights the Staff intended that the Board derive from his testimony.



4.105 In his testimony for NIRS/PC, Dr. Sheehan explained that USEC was once essentially a part of DOE, but was privatized in the late 1990s after passage of the USEC Privatization Act in 1996. *See* Tr. at 1586; *see also* 42 U.S.C. § 2297h et seq. He also noted that USEC, in its agreement with DOE pursuant to the Privatization Act, committed to “continue to operate the outdated Paducah plant until 2010 and develop, build, and bring on line a new state-of-the-art centrifuge plant by the time Paducah closes.” *See* Tr. at 1586. Dr. Sheehan essentially argues, however, that when and if the Paducah GDP will shut down depends upon the economics of the marketplace and, therefore, one cannot properly assume that this domestic source of enrichment services will be eliminated without examining the economics of the market. *See* Tr. at 1646, 1649.

4.106 In this context, however, we do not believe either LES or the Staff is required to disregard the public statements of USEC or assume those statements are erroneous. Rather, the Board finds that such statements are likely more reliable as a basis for assumptions about market supply than efforts to make projections in an otherwise extremely complex economic marketplace. In other words, it is reasonable, in making an effort to project market supply and demand, to rely upon the public statements of market participants, particularly those whose interests seemingly are not aligned with LES, regarding their corporate intent to build new facilities and/or shutter old ones.<sup>12</sup> The relevant inquiry under NEPA is not whether the assumptions made are perfect or unchallengeable, but whether they are reasonable. *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); *see also Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), ALAB-490, 8 NRC 234, 237, 241 (1978). In assessing potential domestic sources of enrichment services, we find it is reasonable to assume that the Paducah GDP will cease operation in the time frame in which its owner says it will.

4.107 Regarding the United States–Russia HEU agreement whereby the United States purchases previously highly enriched materials from Russia, there has been some disagreement about whether it is proper to assume a possible extension of the HEU agreement past its stated termination date of 2013. *See, e.g.,* Tr. at 1664-66. From our perspective, any assumption about whether this agreement will be extended beyond its stated time period would be speculative and, by the same token, there is no sound basis for concluding that the HEU program will not continue into 2013 as the United States–Russia agreement provides. *See* NEF DEIS at 1-3.

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<sup>12</sup>In this regard, it is important to note that the Board is not simply relying upon market statements made by LES, but rather is assessing the reasonableness of statements and policies made by a variety of independent actors, including USEC (which seemingly has no reason to put forth statements in support of LES or its positions) and the United States Congress in the context of the HEU agreement.

4.108 Dr. Sheehan also asserted there is no economic need for both the NEF and the ACP, and that economic factors will determine whether the ACP will actually be constructed, particularly if the NEF is built. *See* Tr. at 1651-54. Nonetheless, aware of LES efforts to construct and operate the NEF, the public record reflects that USEC has submitted its application for a 10 C.F.R. Part 70 license for its planned ACP and there is no evidence before us to indicate any change in USEC corporate policy regarding building the ACP. *See USEC, Inc.* (American Centrifuge Plant), CLI-04-30, 60 NRC 426 (2004) (69 Fed. Reg. 61,411 (Oct. 18, 2004)). Based on the foregoing, as well as the evidence and testimony presented, the Board finds it is reasonable to conclude that USEC will proceed as it has publicly announced, and that any other finding would not provide a sound basis for a market analysis.

4.109 Addressing the potential for a shortfall in enrichment capacity can therefore be reasonably projected based on the analytical assumptions that the ACP will be constructed within the time frame its owner projects, that the Paducah GDP will be shut down when the ACP comes on line, and that the United States–Russia HEU Agreement will terminate in 2013 in accordance with its terms. The LES “best estimate” case analysis assumes that both the NEF and the ACP will be built as scheduled, but also incorporates the conservative assumption that the HEU Agreement will be extended beyond its current expiration date, an assumption that actually causes it to underestimate the demand for enrichment services from other sources. *See* Tr. at 1664-66.

4.110 Based on the foregoing, in its ER LES indicates that its “best estimate” is that from 2011 to 2020 the available supply of and demand for uranium enrichment services will be roughly equal, including the conservative assumption (with respect to forecasts after 2013) that the HEU Agreement will not expire in 2013 in accordance with its terms. *See* Tr. at 1546; ER Purpose and Need at 1.1-14 to 1.1-15, Tables 1.1-3, 1.1-5. The ER also presents seven other possible supply projections incorporating different assumptions about the enrichment services supply sources. *See* ER Purpose and Need at 1.1-15 to 1.1-17. Those other scenarios all assume that the NEF will not be constructed and each projects that some other source will be necessary to fill the supply gap. *See id.* at 1.1-23 to 1.1-24. This view is supported by studies performed for LES by ERI, which concluded that forecast demand for enrichment capacity, both globally and in the U.S., exceeds supply if the NEF is not included, particularly after 2010, shortly before peak production at the NEF would begin. *See* Tr. at 1440-64. The study further concludes that a shortfall is projected if it is assumed that the NEF and the

ACP both begin operations, even with the additional assumption that the United States–Russia agreement is extended.<sup>13</sup> *See* Tr. at 1664-65.

4.111 Given the Board’s determination that in this context the soundest approach to making projections is to rely upon what facility owners state is their corporate intent regarding a facility’s future, we also find reasonable the LES projection that there will be a shortage of enrichment capacity on the supply side of the supply-demand analysis.

## **2. Analysis of Domestic/International Need for Enrichment Services**

4.112 In addition to the foregoing LES “supply” analysis, both LES and the Staff declare that the dominant need for the NEF is to address a domestic national security issue, i.e., to ensure a diverse domestic supply of uranium enrichment services. In addition, all parties addressed the “need” (which we take to mean, in this context, the question of whether there is a “shortage” of enrichment capacity) for enrichment services in both a domestic and an international context.

### *a. National Security Need*

4.113 LES asserts that a primary basis supporting the need for the NEF is to meet a national policy goal of promoting energy and national security through a diverse, reliable domestic enrichment supply. *See, e.g.*, Tr. at 1436-37; ER Purpose and Need at 1.1-1 to 1.1-3. The DEIS likewise reflects this position. *See* NEF DEIS at 1-2 to 1-3. This appears to be an accurate assessment of national needs and goals. The United States Congress has made a number of statements to the effect that uranium enrichment is a strategically important domestic industry of vital national interest that is essential to national and energy security in that the United States nuclear industry cannot become dependent upon foreign sources of enriched uranium. *See* ER Purpose and Need, at 1.1-2; LES Exh. 32, at 45, 55-56 (Staff of Senate Subcomm. of the Comm. on Appropriations, 108th Cong., Energy and Water Development Appropriations for Fiscal Year 2004 (Comm. Print 2003)). In addition, DOE has stressed in public statements and letters to the NRC the importance from a national energy security perspective of establishing additional reliable and economical uranium enrichment capacity in the United States. *See* ER Purpose and Need at 1.1-1; NEF DEIS at 1-3; *see also* LES Exh. 31 (Letter from W.D. Magwood, IV, DOE, to M.J. Virgilio, NRC (July 25, 2002)); LES Exh. 33 (DOE, Effect of U.S./Russia HEU Agreement (Dec. 31, 2001)).

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<sup>13</sup>The Board also notes that the ER supply forecast assumes the closure of Eurodif’s Georges Besse GDP in 2012, in accordance with the plans of its owner, when Eurodif’s own centrifuge plant comes on line. *See* ER Purpose and Need at 1.1-9, Table 1.1-5.

4.114 This need basis rests in large part upon a decline in domestic uranium enrichment from a capacity greater than domestic demand to a level less than half of domestic requirements, *see* ER Purpose and Need at 1.1-1, such that only about 15% of the separative work units (SWUs), the common unit of measurement for uranium enrichment services, purchased by United States nuclear power reactors are currently produced by enrichment plants in the United States, *see* NEF DEIS at 1-3. As a consequence, the addition of the NEF to the enrichment services supply mix would substantially improve the aggregate contribution of domestic enrichment sources,<sup>14</sup> as is reflected by the fact LES currently has in place several firm contractual commitments, with the strong possibility of another supply agreement that, in the aggregate, would commit LES to supply enrichment services to operators of approximately 40% of the current operating nuclear reactors in the United States. *See* Tr. at 1395.

4.115 NIRS/PC point out, however, that these supply contracts as executed do not require LES to supply the enrichment services from the NEF and, therefore, LES could use these contracts to supply enrichment services using Urenco or any other nondomestic supplier. *See* Tr. at 1409-10. On behalf of LES, Mr. Schnoebelen testified that (1) this is a standard contract provision; (2) the contracts are null and void if LES does not receive the NEF license from the NRC and are voidable should LES decide not to construct the NEF; and (3) there is no requirement for Urenco or any other third party to supply the enrichment services if LES does not. *See* Tr. at 1408-12.

4.116 The national need for a diverse, reliable domestic source of enrichment services seems clear. Moreover, in the Board's view, the contract provision of concern to NIRS/PC is simply designed to ensure that the purchaser will get the services it has contracted to purchase, even if the supplier has difficulties at its facility. Without more than the bare assertions of NIRS/PC, that provision cannot be taken to portend that LES will not build or operate the NEF but instead will merely use the agency's license application process, in concert with the contracts, as a subterfuge for providing enrichment services from one of its overseas owners. *See* Tr. at 1409-10. The Board thus finds that the addition of the NEF would create the desired national security benefit.

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<sup>14</sup> NIRS/PC also question whether the NEF would in fact be a "domestic" supplier because LES is owned largely by foreign entities. *See* Tr. at 1649. Although this matter is outside the scope of this contention, we note that the company that owns the facility is a domestic company and that the NEF itself will be located in the United States and subject to the control of federal and state governmental entities.

*b. Domestic v. Global Need*

4.117 As was noted in paragraph 4.101 above, LES examined in depth both the international and the domestic demand for enrichment services, presenting a detailed country-by-country study of projected demand. In this regard, NIRS/PC contends in paragraph (B) of contention EC-7 that the LES ER statements of need for the NEF “depend primarily upon global projections of need rather than projections of need for enrichment services in the U.S.”

4.118 Regarding the importance of global projections to such an analysis, as LES witnesses Krich and Schwartz testified, NUREG-1520, the “Standard Review Plan for the Review of a License Application for Fuel Cycle Facility,” specifically requests information about “foreign requirements for the services” and “alternative sources of supply.” *See* Tr. at 1466; *see also* ER Purpose and Need at 1.1-4. These LES witnesses further testified that the nature of the enrichment market necessitates a global analysis so that the ERI analysis of demand for enrichment services contained in the NEF ER encompassed all countries with nuclear power plants. *See* Tr. at 1440-41, 1467; *see also* ER Purpose and Need at 1.1-7.

4.119 Based on the foregoing, the Board finds it was both necessary and useful to examine the international market for enrichment services, notwithstanding that an identified primary need for the NEF is to establish a viable domestic source for enrichment services. Accordingly, the Board finds that LES did not rely improperly upon an international analysis to substantiate the need for the NEF.

**3. LES Ability To Enter the Market**

4.120 Finally, regarding the NIRS/PC challenge to whether the NEF can effectively enter the enrichment market in the face of existing and anticipated competitors and contribute some public benefit, LES has put into evidence five executed contracts with utility companies for the purchase of enrichment services. *See* LES Exh. 65 (Uranium Enrichment Services Contract Between LES and Utility #1); LES Exh. 66 (Uranium Enrichment Services Contract Between LES and Utility #2); LES Exh. 67 (Uranium Enrichment Services Contract Between LES and Utility #3); LES Exh. 69 (Uranium Enrichment Services Contract Between LES and Utility #5); LES Exh. 70 (Uranium Enrichment Services Contract Between LES and Utility #6). Together, these contracts constitute 67% of the NEF’s expected production capacity for its first 10 years of production, and deliveries of more than 3.7 million SWU between 2018 and 2026. *See* Tr. at 1397. In addition, LES expert Schnoebelen testified that LES is currently finalizing a contract with another utility which, upon execution, would raise the committed production capacity to approximately 72% of the NEF’s output

through the facility's initial 10 years of production. *See* Tr. at 1394, 1397-98; *see also* LES Exh. 68 (Draft Uranium Enrichment Services Contract Between LES and Utility #4). These six contracts together would require LES to supply enrichment services to the operators of 42 of the nation's approximately 100 nuclear power plants, a material increase from the current situation in which less than 15% of the nation's enrichment needs are being met by domestic suppliers. *See* Tr. at 1395; ER Purpose and Need at 1.1-1.

4.121 The Board finds that the best evidence of LES's ability to enter its market is the willingness of its potential customers to purchase its product. Certainly, that type of evidence is better than the results of efforts to model the exceedingly complex economic and policy factors that are involved in any projections of supply and demand. Indeed, the latter are, of necessity, entirely dependent for their accuracy upon the ability of the modeler to (1) determine what factors affect the market and how their effects would be manifested, (2) mathematically model properly the relationships that would be involved, and (3) accurately predict how those factors would behave over the term of the forecast. For its part, LES has avoided this potentially difficult problem by substituting facts for speculative projections. Therefore, the Board finds that LES has reasonably demonstrated its ability to enter the market.<sup>15</sup>

## V. SUMMARY FINDINGS OF FACT AND CONCLUSIONS OF LAW

5.1 Having considered all of the evidence submitted and testimony given by the parties in this proceeding relative to environmental contentions NIRS/PC EC-1 — Impacts Upon Ground and Surface Water; NIRS/PC EC-2 — Impact upon Water Supplies; NIRS/PC EC-4 — Impacts of Waste Storage; and NIRS/PC EC-7 — Need for the Facility, as well as the proposed findings of fact and conclusions of law submitted by the parties, based on the findings and conclusions set forth in Part IV above, the Board finds that LES and/or the Staff have met their burden with regard to each of the above contentions to establish the adequacy of the ER and/or DEIS in accordance with 10 C.F.R. §§ 51.20, 51.45, 51.71.

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<sup>15</sup> Dr. Sheehan also testified for NIRS/PC that he does not believe that these contracts indicate that LES entry into the market for enrichment services will provide a public benefit. Dr. Sheehan first asserts that some of the previously cited contracts are with the domestic partners of LES, who have a nonpublic, i.e., private, incentive to see LES enter the market. *See* Tr. at 1650. Secondly, he argues that other utilities may see the possible entrance of LES into the market as a signal that USEC will not survive in the marketplace, and thus are signing contracts with LES now rather than waiting for USEC's collapse, which could hardly be described as a public benefit. *See* Tr. at 1650. We, however, find Dr. Sheehan's attempts to label the contracts as indicative of the lack of public benefit to be derived from the NEF speculative and lacking any evidentiary basis.

Therefore, relative to the issues raised in connection with contentions NIRS/PC EC-1, NIRS/PC EC-2, NIRS/PC EC-4, and NIRS/PC EC-7, that were the subject of the February 2005 evidentiary hearing, the Board finds that these contentions are resolved in favor of LES and/or the Staff.

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6.1 Pursuant to 10 C.F.R. § 2.713, it is this eighth day of June 2005, ORDERED, that this First Partial Initial Decision will constitute a final decision of the Commission forty (40) days from the date of issuance, i.e., on *Monday, July 18, 2005*, unless a petition for review is filed in accordance with 10 C.F.R. § 2.341, or the Commission directs otherwise. 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 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 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).

6.2 Because a portion of the evidentiary hearing and certain exhibits involved information that was claimed to be proprietary under 10 C.F.R. § 2.390, at the time of issuance this Decision is being treated as containing proprietary information pending further review. On or before *Thursday, June 16, 2005*, LES, NIRS/PC, and the Staff shall provide the Board with a joint filing outlining each (1) proposed redaction from this Decision to which there is no objection; and (2) proposed redaction from this Decision to which there is an objection. In the event any party seeks a redaction, the particular word or phrase should be specified; blanket requests for withholding are disfavored. Further, in accordance with section 2.390, the party seeking the proposed redaction shall at the same time provide a supplement to the joint report that describes with specificity (as supported by any necessary affidavits) the reasons for withholding each proposed redaction from the public. Responses to proposed redactions by any party objecting to the redaction shall be filed on or before *Thursday, June 23, 2005*. Thereafter,

following a final ruling on any proposed redactions, the Board will make this Decision publicly available.

THE ATOMIC SAFETY AND  
LICENSING BOARD<sup>16</sup>

G. Paul Bollwerk, III, Chairman  
ADMINISTRATIVE JUDGE

Paul B. Abramson  
ADMINISTRATIVE JUDGE

Charles N. Kelber  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
June 8, 2005

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<sup>16</sup>Copies of this First Partial Initial Decision were sent this date by overnight express delivery to counsel for (1) Applicant LES; and (2) Intervenors NMED, the AGNM, and NIRS/PC. Copies for counsel for the Staff were placed in the agency's interoffice mail.



UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**E. Roy Hawkens**, Chairman  
**Alan S. Rosenthal**  
**Dr. Peter S. Lam**

**In the Matter of**

**Docket Nos. 30-5980-MLA  
30-5982-MLA  
(ASLBP No. 04-833-07-MLA)  
(Materials License Amendment)**

**SAFETY LIGHT CORPORATION  
(Bloomsburg, Pennsylvania Site)**

**June 29, 2005**

**MEMORANDUM AND ORDER  
(Approving Settlement and Terminating Proceeding)**

On April 22, 2004, Safety Light Corporation applied to renew two materials licenses — No. 37-0030-02 (Docket No. 30-5980-MLA) and No. 37-0030-08 (Docket No. 30-5982-MLA). The Pennsylvania Department of Environmental Protection (Pennsylvania) requested a hearing to oppose the renewal of Safety Light's License No. 37-0030-08, and we granted Pennsylvania's request. *See* LBP-04-25, 60 NRC 516 (2004). Pennsylvania did not oppose the renewal of License No. 37-0030-02.

On December 10, 2004, the NRC Staff denied Safety Light's request to renew the licenses. On December 30, 2004, Safety Light requested a hearing pursuant to 10 C.F.R. § 2.103(b) to challenge the Staff's denial of its license-renewal request. On January 27, 2005, we granted Safety Light's request.

Now, by joint motion dated June 20, 2005, the parties — the NRC Staff, Safety Light, and Pennsylvania — request that we approve a June 16, 2005

Settlement Agreement they have executed, and in the wake thereof, dismiss the hearing requests submitted by Safety Light and Pennsylvania, and terminate this proceeding.

Pursuant to our authority under 10 C.F.R. §§ 2.318, 2.319, and 2.338, we have reviewed the parties' Settlement Agreement, and we conclude that approval of that Agreement and termination of this proceeding are consistent with the public interest. Accordingly, we:

1. *Grant* the requests of Safety Light, Pennsylvania, and the NRC Staff to approve the June 16, 2005 Settlement Agreement, which is attached and incorporated by reference in this Memorandum and Order. Pursuant to 10 C.F.R. § 2.338(h), the entry of the Memorandum and Order has the same force and effect as an order made after a full hearing on Pennsylvania's request for a hearing on Safety Light's renewal application for License No. 37-0030-08, and Safety Light's request for a hearing on denial of its renewal applications for License Nos. 37-0030-02 and 37-0030-08.

2. *Grant* the requests of Safety Light and Pennsylvania to dismiss their respective hearing requests with prejudice.

3. *Terminate* this proceeding.

It is so ORDERED.

THE ATOMIC SAFETY AND  
LICENSING BOARD<sup>1</sup>

E. Roy Hawkens, Chairman  
ADMINISTRATIVE JUDGE

Alan S. Rosenthal  
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam  
ADMINISTRATIVE JUDGE

Rockville, Maryland

June 29, 2005

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<sup>1</sup>Copies of this Memorandum and Order were sent this date by Internet e-mail to counsel for (1) Safety Light Corporation, (2) the Pennsylvania Department of Environmental Protection, and (3) the NRC Staff.

**ATTACHMENT**

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**BEFORE THE ATOMIC SAFETY AND LICENSING BOARD**

**In the Matter of**

**Docket Nos. 30-5980-MLA  
30-5982-MLA  
(ASLBP No. 04-833-07-MLA)  
(Materials License Amendments)**

**SAFETY LIGHT CORPORATION  
(Bloomsburg, Pennsylvania Site)**

**SETTLEMENT AGREEMENT**

This AGREEMENT is made by and between the Staff of the United States Nuclear Regulatory Commission (hereinafter "NRC Staff" or "Staff"), Safety Light Corporation (hereinafter "SLC"), and the Commonwealth of Pennsylvania Department of Environmental Protection (hereinafter "PADEP"), to wit:

WHEREAS SLC is the holder of Byproduct Material License Nos. 37-00030-02 (the "-02 License," which authorizes characterization and decommissioning of contaminated facilities, equipment and land) and 37-00030-08 (the "-08 License," which authorizes SLC to manufacture electron tubes, self-luminous devices, signs and other items containing tritium) at SLC's facility located in Bloomsburg, PA (the "Bloomsburg facility" or "Bloomsburg site");

WHEREAS, in April 2004, SLC filed applications for renewal of the -02 and -08 Licenses that were to expire on December 31, 2004, requesting a continued exemption from the requirements of 10 C.F.R. § 30.35 and a reduced rate of contribution to the decommissioning trust fund;

WHEREAS, by order dated November 9, 2004 (LBP-04-25, 60 NRC 516 (2004)), the Atomic Safety and Licensing Board (hereinafter "Board") granted the August 30, 2004, hearing request of PADEP on the -08 License and that hearing request opposed SLC's requests for a continued exemption and a reduced rate of contribution into the decommissioning trust fund;

WHEREAS, on December 10, 2004, the NRC Staff denied the SLC renewal applications and issued an immediately effective order suspending the licenses

(as of January 1, 2005), citing its determinations that SLC failed to submit a decommissioning funding plan as required by 10 C.F.R. § 30.35, SLC failed and willfully failed to make payments to its decommissioning trust fund as required by its licenses and SLC failed to demonstrate that an exemption should be granted;

WHEREAS, on January 27, 2005, the Board granted SLC's request for hearing on the "Order Suspending License (Immediately Effective)," dated December 10, 2004, granted SLC's request for hearing on the denial of renewal applications for the -02 and -08 Licenses, and consolidated the proceeding involving the suspension of the SLC licenses with the licensing proceeding. Order (Order Granting Hearings, Consolidating Proceedings, and Establishing Hearing Schedule), dated January 27 2005 (unpublished).

WHEREAS, on February 22, 2005, the Commission (CLI-05-7, 61 NRC 69 (2005)), lifted the immediate effectiveness of the Staff's December 10, 2004, license suspension order;

WHEREAS, by letter dated February 25, 2005, the Staff withdrew the suspension order and the Board (LBP-05-8, 61 NRC 185 (March 4, 2004)) granted the joint motion of SLC and the Staff to terminate the enforcement proceeding (Docket Nos. 030-05980-EA and 030-05982-EA) as moot;

WHEREAS, subsequent to the February 16, 2005, filing of written presentations by SLC, PADEP and the Staff, the Board issued an order, dated April 7, 2005 (unpublished), granting the parties' joint motion to hold this proceeding in abeyance for a period of time to allow them time to pursue settlement negotiations (and that time period currently expires on June 13, 2005);

WHEREAS, as a result of the foregoing, the undersigned parties have concluded that it is in their respective interests, as well as the public interest, to settle the matters at issue in the above-captioned licensing proceeding and such settlement is encouraged by 10 C.F.R. § 2.338; and

WHEREAS, in consideration of the promises and representations in this document IT IS HEREBY AGREED AS FOLLOWS:

1. The NRC Staff will rescind its December 10, 2004 denial of SLC's applications to renew the -02 and -08 Licenses, issue renewed licenses (conditioned consistent with this agreement) with December 31, 2007 expiration dates, and grant SLC an exemption from the requirements in 10 C.F.R. §§ 30.32(h) and 30.35(a) through (f) during the aforementioned renewal period.
2. SLC will make monthly deposits into the decommissioning trust fund in the amount of \$12,000 per month payable by the 1st of each month during the license renewal period. Funds in the decommissioning trust fund may not be committed or used without the written permission of the Region I (RI) Regional Administrator and shall be used only for reasonable expenses directly associated with decommissioning activities (including disposal of tritium wastes from pre-2000 license activities) for the site and

for maintenance of the perimeter fence and warning signs. Legal fees and expenses of counsel shall not be chargeable against the decommissioning trust fund. Payments by SLC to another Federal or State agency in connection with decommissioning activities at the Bloomsburg site will be considered an offset against SLC's required monthly payments to the decommissioning trust fund.

3. SLC's obligation to make decommissioning trust fund payments shall commence June 1, 2005, however, SLC's June deposit into such fund may be made within 10 days after the date of issuance of a Board order approving this settlement agreement.
4. The NRC RI Regional Administrator may approve brief extensions in the decommissioning trust fund payment schedule upon SLC's demonstration of good cause (for example, through appropriate financial records or a showing of payments made to cover the cost of Bloomsburg site decommissioning activities undertaken by another Federal agency). If SLC submits such demonstration at least 7 days prior to the due date of any scheduled monthly payment, that payment will not be considered delinquent during the pendency of such request or when a revised payment schedule is approved.
5. SLC will report to the NRC and PADEP, within 10 days, any failure to make a payment to the decommissioning trust fund. The report shall discuss the cause of the failure, corrective actions to prevent repetition, and why the NRC should have confidence that SLC has sufficient resources to conduct licensed activities safely. SLC acknowledges that the NRC considers timely payment to the decommissioning trust fund to be significant. SLC agrees that any failure to make a payment when due that has not been cured by payment in full within 90 days of the due date shall result in the rescission of the exemption from 10 C.F.R. §§ 30.32(h) and 30.35(a)–(f) as well as the immediate suspension of the Licenses without further action by the NRC. If failure to make a payment is not fully cured with 90 days of the due date, SLC will immediately initiate any and all actions to comply with 10 C.F.R. § 30.36(b) and (c).
6. SLC will cease licensed activities at the Bloomsburg site by December 31, 2007 and agrees not to request renewal of its -02 and -08 Licenses beyond that date. SLC will develop a plan for orderly shutdown of its licensed activities at the Bloomsburg site and submit such plan by March 31, 2006 to the NRC RI Regional Administrator, for approval, with a copy provided to PADEP. SLC agrees to submit quarterly progress reports to NRC and PADEP (beginning on September 30, 2005) regarding the development and implementation of said plan. Consistent with the requirements of 10 C.F.R. § 30.36(c), this plan will include provisions to:

- a. cooperate fully with EPA emergency removal and remediation efforts, including continued security to assure safe conditions at the site and the removal and disposal of non-radiological waste on an ongoing basis;
  - b. Manage licensed material such that no licensed material inventory associated with tritium manufacturing operations, or tritium waste generated after September 30, 2004, remains at the site after December 31, 2007;
  - c. Notify, by August 30, 2007, SLC customers of exit signs and other devices containing licensed material that these signs and devices can no longer be returned to the Bloomsburg, PA facility after October 31, 2007. Any such signs or devices possessed by SLC must be transferred to an authorized recipient by December 31, 2007.
  - d. Notify, by October 31, 2006, tritium foil customers regarding the December 31, 2007 termination of licensed activities at the Bloomsburg facility.
  - e. Dispose of the pre-2000 tritium waste (i.e., solid waste now stored in the Waste Building and in hoods in the Tritium Processing Building) and tritium wastes generated during the renewal period. The approved plan may be included as a condition of the -08 License and shall provide for:
    - (1) Characterization of pre-2000 tritium waste by January 31, 2007, to the extent sufficient for waste disposal and development of a cost estimate for such disposal. This characterization is to be completed by January 31, 2007, provided sufficient funds are available in the decommissioning trust fund, or completed when sufficient sums subsequently become available in the decommissioning trust fund.
    - (2) Disposal of pre-2000 tritium waste, including obtaining any required allotment from the LLW disposal facility located in Barnwell, South Carolina, for any waste (e.g., foils and targets) that must be disposed of at this facility.
7. SLC understands that this settlement agreement does not relieve SLC of its responsibility as a Potentially Responsible Party for costs incurred by the EPA for remediation of the Bloomsburg site under CERCLA or relieve SLC of its responsibility under the PA radium license (PA-166). PADEP agrees, however, that SLC's responsibility for payment of fees under the PA radium license (PA-166) will not exceed \$5,000 in any year and

that SLC will not be required to pay any fees, penalties or other charges attributable to activities before the effective date of this agreement. This limitation on past and future radium license fees is effective so long as SLC complies with the terms of the settlement agreement relating to payments by SLC into the decommissioning trust fund.

8. SLC agrees to accept a Notice of Violation (NOV) (for failures characterized as a Severity Level III problem) concerning (1) the willful failure to make payments to the decommissioning trust fund in accordance with the schedules defined in License Conditions 16 and 20.A. of the -02 and -08 Licenses, respectively, and (2) the failure to dispose of pre-2000 tritium wastes in accordance with Condition 19 of the -08 License. The NRC agrees to acknowledge, in correspondence issuing the NOV, SLC's position that it was not able to make the required payments. The NRC also agrees to waive its right to issue any associated civil penalty. No SLC response to the NOV will be required.
9. SLC agrees to provide to PADEP, within 10 business days of the effective date of this agreement, full disclosure of relevant financial records of SLC that support its position that SLC lacks sufficient funds or is unable to secure a security bond or other financial assurance that meets the requirements of 10 C.F.R. § 30.35. PADEP agrees to assure that all such proprietary information is protected from public disclosure.
10. PADEP agrees to withdraw its intervention petition. SLC agrees to withdraw its hearing request on the license renewal denial. SLC and PADEP agree to waive any right to a hearing or to otherwise challenge the agreed upon settlement terms.
11. NRC agrees to consider, in accordance with applicable regulations, an SLC application for a new license to authorize its manufacturing activities at a new location. NRC anticipates that its review of a technically sufficient SLC application could be completed within 120 days. SLC understands that NRC intends to grant no further exemptions from financial assurance requirements to SLC.
12. Unless otherwise specified in this agreement, time periods in days denote calendar days.
13. Nothing in this agreement shall foreclose the Environmental Protection Agency from taking any action with respect to the Bloomsburg site.
14. In the event that the Commonwealth of Pennsylvania acquires, pursuant to an agreement with the NRC under section 274b of the Atomic Energy Act, as amended, regulatory authority over the above-mentioned licenses

for the Bloomsburg site, all responsibilities of, and references to, the “NRC” specified in this settlement agreement shall be deemed to refer to the “Commonwealth of Pennsylvania” or the appropriate State agency.

IN WITNESS WHEREOF, the NRC Staff, SLC and PADEP have caused this AGREEMENT to be executed by their duly authorized representatives.

\_\_\_\_\_  
Date: 6/14/05  
William E. Lynch, Jr.  
Vice-President  
Safety Light Corporation

\_\_\_\_\_  
Date: 6/16/05  
Jack R. Strosnider, Director  
Office of Nuclear Material Safety  
and Safeguards  
U.S. Nuclear Regulatory Commission

\_\_\_\_\_  
Date: 6/15/05  
David J. Allard  
Pennsylvania Department of  
Environmental Protection  
Director, Bureau of Radiation  
Protection

\_\_\_\_\_  
Date: 6/15/05  
Thomas M. Crowley  
Pennsylvania Department of  
Environmental Protection



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ALL POWER REACTOR LICENSEES AND RESEARCH REACTOR LICENSEES WHO TRANSPORT SPENT NUCLEAR FUEL  
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USEC INC.  
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**CASES**

- 9 to 5 Organization for Women Office Workers v. Board of Governors of the Federal Reserve System*, 721 F.2d 1, 7-10 (1st Cir. 1983)  
under FOIA Exemption 4, the legal definition of “confidential” is information whose disclosure is likely to impair the government’s future ability to obtain necessary information, or impair other government interests such as compliance, program efficiency and effectiveness, and the fulfillment of an agency’s statutory mandate, or cause substantial harm to the competitive position of the person from whom the information was obtained; CLI-05-1, 61 NRC 164 (2005)
- 9 to 5 Organization for Women Office Workers v. Board of Governors of the Federal Reserve System*, 721 F.2d 1, 10 (1st Cir. 1983)  
disclosure to the public of proprietary information from a settlement would not only undermine one of the principal grounds of that settlement, but would also discourage parties from settling their financial disputes in the future, for fear that the agency would likewise publicly disclose the proprietary information in their settlements; CLI-05-1, 61 NRC 168 (2005)
- Adickes v. Kress & Co.*, 398 U.S. 144, 157 (1970)  
under both NRC and federal case law, the party seeking summary disposition bears the burden of showing the absence of a genuine issue of material fact; LBP-05-4, 61 NRC 79 (2005)
- Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-8, 37 NRC 181, 184-85 (1993)  
the Commission ordinarily does not decide moot questions but will do so to avoid any implication that it approves Board-imposed security conditions; CLI-05-14, 61 NRC 362 (2005)
- Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102 (1993)  
bare assertions and general denials are insufficient to defend against a properly supported motion for summary disposition; LBP-05-4, 61 NRC 81, 100 (2005)  
summary disposition motions under 10 C.F.R. § 2.749 are analogous to summary judgment motions under Rule 56 of the Federal Rules of Civil Procedure and should be evaluated under the same standards; LBP-05-4, 61 NRC 79 (2005)  
under both NRC and federal case law, the party seeking summary disposition bears the burden of showing the absence of a genuine issue of material fact; LBP-05-4, 61 NRC 79 (2005)
- Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993)  
if the nonmoving party fails to oppose any material fact properly set out in the moving party’s statement of material facts that accompanies the summary disposition motion, then that fact will be deemed admitted; LBP-05-4, 61 NRC 79 (2005)
- Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-94-6, 39 NRC 285, 301 (1994)  
adequate evidence exists when facts and circumstances within the NRC Staff’s knowledge, or on which it has reasonably trustworthy information, are sufficient to warrant a person of reasonable caution to believe that the charges specified in the order are true; LBP-05-2, 61 NRC 60 (2005)  
the “adequate evidence” standard is likened to the “probable cause” standard in the criminal context, which must be satisfied, for example, to justify an arrest or the issuance of a warrant; LBP-05-2, 61 NRC 60 (2005)

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- Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-94-6, 39 NRC 285, 301-02 (1994)  
application of a nonstringent evidentiary standard in the context of immediately effective orders strikes a reasonable balance between the Commission's ability to protect the public health, safety, or interest on the basis of reasonably trustworthy information while still providing affected parties with a measure of protection against arbitrary enforcement action by the Commission; LBP-05-2, 61 NRC 60 (2005)
- Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-94-6, 39 NRC 285, 302 (1994)  
the lenient "adequate evidence" standard is used only as a preliminary procedural safeguard against the Staff's ordering immediately effective action based on clear error, unreliable evidence, or unfounded allegations; LBP-05-2, 61 NRC 64 (2005)
- Airport Neighbors Alliance, Inc. v. United States*, 90 F.3d 426 (10th Cir. 1996)  
NEPA requires, under the cumulative-impacts rubric, the taking into account of future reasonably foreseeable results of current federal licensing actions, and imposes a rule against incrementalism, that is, against analyzing a succession of currently contemplated federal licensing actions in series, as though they were separate, unrelated activities; LBP-05-5, 61 NRC 119 (2005)
- Alabama Power Co.* (Joseph M. Farley Nuclear Plant, Units 1 and 2), CLI-74-12, 7 AEC 203, 204 (1974)  
Commission jurisprudence has long provided that various repose doctrines must give way where changed circumstances or public-interest factors dictate; CLI-04-27, 61 NRC 154 (2005)
- Alabama Power Co. v. Department of Energy*, 307 F.3d 1300 (11th Cir. 2002)  
DOE was directed to start disposing of spent fuel no later than January 31, 1998; CLI-05-12, 61 NRC 351 n.25 (2005)
- Allied-General Nuclear Services* (Barnwell Nuclear Fuel Plant Separations Facility), ALAB-296, 2 NRC 671, 680 (1975)  
for purposes of the NEPA analysis of the project, the licensing board decision made on the basis of the entire record can be considered to have amended the final environmental impact statement *pro tanto*; LBP-05-5, 61 NRC 124 (2005); LBP-05-13, 61 NRC 404 (2005)
- Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)  
real disputes over facts that might affect the outcome of the case will most likely preclude the entry of summary judgment; LBP-05-4, 61 NRC 80 (2005)
- Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991)  
a contention that either failed to raise a material legal or factual dispute or was outside the scope of the hearing, or both, is inadmissible; CLI-05-4, 61 NRC 16 (2005)
- Babcock & Wilcox Co. v. Occupational Safety and Health Review Commission*, 622 F.2d 1160, 1166 (3d Cir. 1980)  
the term "willfulness" means defiance or such reckless disregard of consequences as to be equivalent to a knowing, conscious, and deliberate flaunting of a requirement; LBP-05-2, 61 NRC 63 n.8 (2005)
- Babcock & Wilcox Co. v. Occupational Safety and Health Review Commission*, 622 F.2d 1160, 1167 (3d Cir. 1980)  
an intentional disregard of statutory requirements differs little from an obstinate refusal to comply, nor is there in context much to distinguish defiance from intentional disregard; LBP-05-2, 61 NRC 63 n.8 (2005)  
the term "willfulness" in the Occupational Safety and Health Act of 1970 is defined as an act done voluntarily, with either an intentional disregard of, or plain indifference to, OSHA requirements; LBP-05-2, 61 NRC 63 n.8 (2005)
- Baltimore Gas & Electric Co. v. Natural Resources Defense Council*, 462 U.S. 87, 97 (1983)  
an agency must take a "hard look" at the environmental consequences of a proposed action before taking that action; LBP-05-8, 61 NRC 207 (2005)
- Baltimore Gas & Electric Co. v. Natural Resources Defense Council*, 462 U.S. 87, 101 (1983)  
applicant asserts administrative efficiency to justify initially raising a supplemental request with the Commission rather than with the licensing board; CLI-05-1, 61 NRC 181 (2005)

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- Bragdon v. Abbott*, 524 U.S. 624, 653 (1998)  
in determining whether summary judgment is appropriate, the trier of fact must focus on whether the expert opinions are sufficiently grounded upon a factual basis; LBP-05-4, 61 NRC 81 (2005)
- Bullcreek v. NRC*, 359 F.3d 536 (D.C. Cir. 2004)  
State's request is too vague to satisfy NRC's established process for seeking a rulemaking; CLI-05-12, 61 NRC 355 n.37 (2005)
- Burrell v. Mississippi State Tax Commission*, 536 So. 2d 848 (Miss. 1989)  
amendment to Mississippi constitution allows state legislature to impose a special mode of valuation, assessment, and levy upon nuclear-powered electrical generating plants and to distribute the tax as it sees fit; CLI-05-4, 61 NRC 14 n.13 (2005)
- Calvert Cliffs' Coordinating Committee, Inc. v. AEC*, 449 F.2d 1109, 1118 (D.C. Cir. 1971)  
in making its NEPA findings in connection with a power reactor construction permit authorization, a hearing board must examine the environmental impact statement carefully to determine whether the Staff review was adequate and must independently consider the final balance among conflicting factors that is struck in the Staff's recommendation; LBP-05-7, 61 NRC 197 (2005)
- Cargill, Inc. v. Hardin*, 452 F.2d 1154, 1156, 1173 (8th Cir. 1971)  
an entity willfully violates a requirement if, regardless of culpable purpose, it intentionally performs an act that it knows is prohibited, or intentionally fails to perform an act that it knows is required, or engages in conduct that may be characterized as careless disregard of requirements that results in a violation of such requirements; LBP-05-2, 61 NRC 63 (2005)
- Carney v. American University*, 151 F.3d 1090, 1096 (D.C. Cir. 1998)  
acting as an appellate body, the Commission is free to affirm a board decision on any ground finding support in the record, whether previously relied upon or not; CLI-05-1, 61 NRC 166 (2005)
- Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), ALAB-490, 8 NRC 234, 237, 241 (1978)  
the relevant inquiry under NEPA is not whether the assumptions made are perfect or unchallengeable, but whether they are reasonable; LBP-05-13, 61 NRC 440 (2005)
- Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), CLI-01-7, 53 NRC 113, 118 (2001)  
Staff's significant hazards consideration determination is final, subject only to the Commission's discretion, on its own initiative, to review the determination; CLI-05-14, 61 NRC 361 n.2 (2005)
- Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), LBP-78-2, 7 NRC 83, 85 (1978)  
a board may consider material and relevant evidence, on its own motion, in part in order to fulfill its important responsibility to preserve a record suitable for review; LBP-05-10, 61 NRC 255 (2005)
- Carolina Power and Light Co.* (Shearon Harris Nuclear Power Plant, Units 1 and 2), LBP-84-7, 19 NRC 432, 435-36 (1984)  
quotations from or citations to the published work of researchers who have apparently reached conclusions at variance with the movant's affiants likely will be insufficient to defeat a motion for summary disposition; LBP-05-4, 61 NRC 81 (2005)
- CFC Logistics, Inc.*, LBP-03-16, 58 NRC 136, 147-48 (2003)  
construction undertaken pending Commission and judicial review would be at its own risk; LBP-05-12, 61 NRC 331 (2005)
- City of Los Angeles v. Lyons*, 461 U.S. 95, 102 (1983)  
for standing, the potential for injury must be actual or imminent; CLI-05-11, 61 NRC 311 (2005)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 92-96 (1993)  
NRC litigation is allowed on procedural claims; CLI-05-6, 61 NRC 39 (2005)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 95 (1993)  
for construction permit and operating license proceedings involving nuclear power reactors, the Commission generally has recognized a presumption of standing to intervene for those persons who have frequent contacts with the area; CLI-05-11, 61 NRC 311 (2005)

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- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), LBP-95-17, 42 NRC 137, 145 (1995)  
where the meaning of a regulation is clear and obvious, the regulatory language is conclusive and a board may not disregard the letter of the regulation, but must enforce the regulation as written; LBP-05-10, 61 NRC 297, 299 (2005)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), LBP-83-46, 18 NRC 218, 223 (1983)  
to be considered genuine, the factual record, considered in its entirety, must be enough in doubt so that there is a reason to hold a hearing to resolve the issue; LBP-05-4, 61 NRC 79 (2005)
- CNA Financial Corp. v. Donovan*, 830 F.2d 1132, 1152 (D.C. Cir. 1987), *cert. denied*, 485 U.S. 977 (1988)  
the third prong of FOIA Exemption 4 requires a showing of the existence of competition and the likelihood of substantial competitive injury; CLI-05-1, 61 NRC 164, 171 (2005)
- CNA Financial Corp. v. Donovan*, 830 F.2d 1132, 1152 (D.C. Cir. 1987), *cert. denied*, 485 U.S. 977, 1152 (1988)  
competitive injury is limited to injury directly caused by a competitor's use of the information; CLI-05-1, 61 NRC 164 (2005)
- CNA Financial Corp. v. Donovan*, 830 F.2d 1132, 1152 (D.C. Cir. 1987), *cert. denied*, 485 U.S. 977, 1154 & n.158 (1988)  
competitive harm in the FOIA context is limited to harm flowing from the affirmative use of proprietary information by competitors; CLI-05-1, 61 NRC 172 (2005)
- Coalition on Sensible Transportation, Inc. v. Dole*, 826 F.2d 60, 66 (D.C. Cir. 1987)  
a licensing board's job is to ensure that the agency has adequately considered and disclosed the environmental impact of its actions; LBP-05-13, 61 NRC 404 (2005)
- Communities Against Runway Expansion v. FAA*, 355 F.3d 678, 688-89 (D.C. Cir. 2004)  
the environmental report, and ultimate environmental impact statement, need only make reasonable comparisons, not every conceivable one; CLI-05-4, 61 NRC 19 n.43 (2005)
- Community Counseling Service, Inc. v. Reilly*, 317 F.2d 239, 243 (4th Cir. 1963)  
a trial court may not exclude a deposition merely because the party is available to testify in person; LBP-05-10, 61 NRC 252 (2005)
- Consolidated Edison Co. of New York* (Indian Point, Unit 2), ALAB-453, 7 NRC 31, 34 (1978)  
although the DEIS must address the monitoring of contaminants in effluent, compliance with State requirements is, in the first instance, a matter for the State; LBP-05-13, 61 NRC 419 (2005)
- Consolidated Edison Co. of New York* (Indian Point, Unit 2), LBP-83-29, 17 NRC 1117, 1118-20 (1983)  
Federal Rule of Civil Procedure 32(a)(2) did not apply because the deponent was not an "officer"; LBP-05-10, 61 NRC 251 n.29 (2005)
- Consumers Power Co.* (Midland Plant, Units 1 and 2), ALAB-115, 6 AEC 257 (1973)  
petitioners failed to show why a document's contents could not have been furnished in a more timely fashion; CLI-05-14, 61 NRC 362 n.7 (2005)
- Consumers Power Co.* (Palisades Nuclear Plant), LBP-79-20, 10 NRC 108, 124 (1979)  
applicants do not have to have all of their other permits in hand before they can obtain an agency license; LBP-05-5, 61 NRC 126 (2005)
- Continental Oil Co. v. Federal Power Commission*, 519 F.2d 31, 35 (5th Cir. 1975), *cert. denied*, 425 U.S. 971 (1976)  
competitive injury can flow from either competitors or noncompetitors such as customers and suppliers; CLI-05-1, 61 NRC 164 (2005)
- Critical Mass Energy Project v. NRC*, 975 F.2d 871, 879 (D.C. Cir. 1992) (*en banc*), *cert. denied*, 507 U.S. 984 (1993), *approving on this ground but rev'g and vacating on other grounds*, 830 F.2d 278, 286 (D.C. Cir. 1987)  
under FOIA Exemption 4, the legal definition of "confidential" is information whose disclosure is likely to impair the government's future ability to obtain necessary information, or impair other government interests such as compliance, program efficiency and effectiveness, and the fulfillment of an agency's statutory mandate, or cause substantial harm to the competitive position of the person from whom the information was obtained; CLI-05-1, 61 NRC 164 (2005)

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- Curators of the University of Missouri* (TRUMP-S Project), CLI-91-7, 33 NRC 295 (1991)  
the Commission has the authority to review interlocutory and final licensing board decisions on its own motion; CLI-05-14, 61 NRC 362 (2005)
- Curators of the University of Missouri* (TRUMP-S Project), CLI-95-1, 41 NRC 71, 121 (1995)  
licensing boards have no jurisdiction over the Staff's performance of responsibilities that it fulfills outside the hearing process; LBP-05-12, 61 NRC 330 (2005)
- Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589-90 (1993)  
an expert's method for forming his opinion need not be generally recognized in the scientific community, but the opinion must be based on the methods and procedures of science rather than on subjective belief or unsupported speculation; LBP-05-4, 61 NRC 80 (2005)
- De Sylva v. Ballentine*, 351 U.S. 570, 573 (1956)  
the word "or" is often used as a careless substitute for the word "and" in phrases where "and" would express the thought with greater clarity; LBP-05-10, 61 NRC 300 (2005)
- Department of Justice v. Reporters Committee for Freedom of the Press*, 489 U.S. 749, 773 (1989)  
the purpose of FOIA and 10 C.F.R. 2.309 is not fostered by disclosure of information about private citizens that reveals little or nothing about an agency's own conduct; CLI-05-1, 61 NRC 169 (2005)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358-59 (2001)  
a request for hearing or petition for leave to intervene must set forth with particularity the contentions sought to be raised; CLI-05-15, 61 NRC 372 (2005)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-02-1, 55 NRC 1, 2 (2002)  
reconsideration petitions must establish an error in a Commission decision, based upon an elaboration or refinement of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification; CLI-04-27, 61 NRC 153 (2005)
- Dominion Nuclear North Anna, L.L.C.* (Early Site Permit for North Anna ESP Site), CLI-04-8, 59 NRC 113, 118-19 (2004)  
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- Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-9, 55 NRC 245, 249 n.13 (2002)  
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- Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-6, 59 NRC 62, 74 (2004)  
licensing boards and presiding officers have no jurisdiction over the Staff's performance of responsibilities that it fulfills outside the hearing process; LBP-05-9, 61 NRC 222 (2005); LBP-05-12, 61 NRC 330 (2005)
- Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-11, 59 NRC 203, 209 (2004)  
in granting review of certified questions, the Commission follows its customary practice of accepting Board-certified questions; CLI-05-9, 61 NRC 236 (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), *clarifying* CLI-02-17, 56 NRC 1 (2002)  
a contention of omission, upon cure, becomes moot; LBP-05-13, 61 NRC 411 (2005)
- 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)  
although petitioners might prefer different language or emphasis, editing NEPA documents is not a function of the NRC hearing process; CLI-05-4, 61 NRC 18 (2005)
- Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 NRC 460, 469 (1982)  
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- Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982)  
where the opinions of two experts may appear to be in conflict with each other, Federal Rule of Evidence 702 may also serve as guidance in determining whether the experts' opinions preclude summary disposition of the contention; LBP-05-4, 61 NRC 80 (2005)
- Eastern Produce Co. v. Benson*, 278 F.2d 606, 609 (3d Cir. 1960)  
an entity willfully violates a requirement if, regardless of culpable purpose, it intentionally performs an act that it knows is prohibited, or intentionally fails to perform an act that it knows is required, or engages in conduct that may be characterized as careless disregard of requirements that results in a violation of such requirements; LBP-05-2, 61 NRC 63 (2005)
- Finer Foods Sales Co., Inc. v. Block*, 708 F.2d 774, 777-78 (D.C. Cir. 1983)  
an entity willfully violates a requirement if, regardless of culpable purpose, it intentionally performs an act that it knows is prohibited, or intentionally fails to perform an act that it knows is required, or engages in conduct that may be characterized as careless disregard of requirements that results in a violation of such requirements; LBP-05-2, 61 NRC 62 (2005)
- Flathead Joint Board of Control v. United States Department of Interior*, 309 F. Supp. 2d 1217, 1221, 1222 (D. Mont. 2004)  
disclosure requests have been refused where the information's release will harm the future negotiating position of a party; CLI-05-1, 61 NRC 169 (2005)
- Florida Power and Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-91-13, 34 NRC 185, 188 (1991)  
where there are no intervenors left in a case, a matter may be referred to the Staff for study; LBP-05-12, 61 NRC 331 (2005)
- FMRI, Inc.* [formerly *Fansteel, Inc.*] (Muskogee, Oklahoma Facility), LBP-04-8, 59 NRC 266, 271 (2004)  
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- Frank Irey, Jr., Inc. v. Occupational Safety and Health Review Commission*, 519 F.2d 1200, 1207 (3d Cir. 1974), *aff'd en banc*, 519 F.2d 1215 (1975), *aff'd sub nom. Atlas Roofing Co. v. Occupational Safety and Health Review Commission*, 430 U.S. 442 (1977)  
the term "willfulness" means defiance or such reckless disregard of consequences as to be equivalent to a knowing, conscious, and deliberate flaunting of a requirement; LBP-05-2, 61 NRC 63 n.8 (2005)
- Frazer v. Forest Service*, 97 F.3d 367, 371 (9th Cir. 1996)  
all that is required under FOIA Exemption 4 is a showing that a company faces both actual competition and a likelihood of substantial competitive injury; CLI-05-1, 61 NRC 173 (2005)
- Garside v. Osco Drug, Inc.*, 895 F.2d 46, 50 (1st Cir. 1990)  
expert opinion is admissible only if the affiant is competent to give an expert opinion and only if the factual basis for that opinion is adequately stated and explained in the affidavit; LBP-05-4, 61 NRC 81 (2005)
- GC Micro Corp. v. Defense Logistics Agency*, 33 F.3d 1109, 1113 (9th Cir. 1994)  
all that is required under FOIA Exemption 4 is a showing that a company faces both actual competition and a likelihood of substantial competitive injury; CLI-05-1, 61 NRC 173 (2005)
- GC Micro Corp. v. Defense Logistics Agency*, 33 F.3d 1109, 1115 (9th Cir. 1994)  
the Commission need not engage in a sophisticated economic analysis of the substantial competitive harm that might result from disclosure of proprietary information; CLI-05-1, 61 NRC 177 n.101 (2005)
- General Electric Co.* (GE Morris Operation Spent Fuel Storage Facility), LBP-82-14, 15 NRC 530, 532 (1982)  
if there is a likelihood that a genuine issue of fact exists to be litigated, or if there is doubt as to whether the parties should be required to proceed further, a summary disposition motion should be denied; LBP-05-4, 61 NRC 79 (2005)
- General Electric Co. v. NRC*, 750 F.2d 1394, 1397 (7th Cir. 1984)  
it is not the Commission's intent to permit a greater degree of withholding of documents from public disclosure under 10 C.F.R. § 2.790 than would be permitted under the Freedom of Information Act; CLI-05-1, 61 NRC 163 (2005)



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- General Electric Co. v. NRC*, 750 F.2d 1394, 1401 (7th Cir. 1984)  
Congress's purpose in enacting AEA § 103(b)(3) was to protect the property right, the commercial right, which a licensee as a developer of a new procedure, new idea, should properly have; CLI-05-1, 61 NRC 180 (2005)
- General Electric Co. v. NRC*, 750 F.2d 1394, 1403 (7th Cir. 1984)  
a proceeding on a request for information is not required to be as elaborate as a licensing or other formal proceeding; CLI-05-1, 61 NRC 177 n.101 (2005)
- George Steinberg & Son, Inc. v. Butz*, 491 F.2d 988, 994 (2d Cir.), *cert. denied*, 419 U.S. 830 (1974)  
an entity willfully violates a requirement if, regardless of culpable purpose, it intentionally performs an act that it knows is prohibited, or intentionally fails to perform an act that it knows is required, or engages in conduct that may be characterized as careless disregard of requirements that results in a violation of such requirements; LBP-05-2, 61 NRC 63 (2005)
- Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995)  
the Commission has long looked for guidance to current judicial concepts of standing, which require a concrete and particularized injury that is fairly traceable to the challenged action and likely to be redressed by a favorable decision; CLI-05-11, 61 NRC 311 (2005)
- Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116 (1995)  
in nonreactor cases, there is no presumption of standing based upon geographic proximity, absent a determination that the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; CLI-05-11, 61 NRC 311 (2005)
- Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116-17 (1995)  
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- Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), CLI-93-16, 38 NRC 25, 38 & n. 27 (1993)  
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- Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), CLI-93-16, 38 NRC 25, 41 (1993)  
if an application contains disputed information or omits required information, petitioners normally must specify the portions of the application that are in dispute or incomplete; CLI-05-15, 61 NRC 381 (2005)
- Gilmore v. United States Department of Energy*, 4 F. Supp. 2d 912, 922 (N.D. Cal. 1998)  
under FOIA, the public interest to be weighed in this balance has been narrowly defined as an interest in determining the bases for and results of agency action, and does not include incidental benefits from disclosure that may be enjoyed by members of the public; CLI-05-1, 61 NRC 180 n.115 (2005)
- Gollust v. Mendell*, 501 U.S. 115, 126 (1991)  
if a future question arises about petitioner's property interest, applicant and the NRC Staff can challenge the petitioner's standing then; CLI-05-11, 61 NRC 315 (2005)
- Goodman v. Benson*, 286 F.2d 896, 900 (7th Cir. 1961)  
an entity willfully violates a requirement if, regardless of culpable purpose, it intentionally performs an act that it knows is prohibited, or intentionally fails to perform an act that it knows is required, or engages in conduct that may be characterized as careless disregard of requirements that results in a violation of such requirements; LBP-05-2, 61 NRC 63 (2005)
- Goodyear Tire & Rubber Co. v. Chiles Power Supply*, 332 F.3d 976, 983 (6th Cir. 2003)  
a settlement negotiation privilege is recognized, although not in a FOIA context; CLI-05-1, 61 NRC 168 n.40 (2005)
- Gulf & Western Industries, Inc. v. United States*, 615 F.2d 527, 530 (D.C. Cir. 1979)  
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- all that is required under FOIA Exemption 4 is a showing that a company faces both actual competition and a likelihood of substantial competitive injury; CLI-05-1, 61 NRC 173 (2005)
- Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 48 (1994)
- the Atomic Energy Act authorizes the Commission to accord protection from radiological injury to both health and property interests; CLI-05-11, 61 NRC 314 (2005)
- Gulf States Utilities Co.* (River Bend Station, Unit 1), LBP-95-10, 41 NRC 460, 473 (1995)
- the foundation of the NRC financial assurance requirement is to protect the public from radiological hazards that could arise if the licensee is not able to meet expenses; CLI-04-27, 61 NRC 149 (2005)
- Hamlin Testing Laboratories, Inc.*, 2 AEC 423, 428 (1964)
- a licensee willfully violated a Commission requirement when it knew what was required of it under the Commission's regulations and the terms and conditions of its license but failed to comply therewith; LBP-05-2, 61 NRC 63 (2005)
- Hertz v. Luzenac America, Inc.*, 370 F.3d 1014, 1017 (10th Cir. 2004)
- acting as an appellate body, the Commission is free to affirm a board decision on any ground finding support in the record, whether previously relied upon or not; CLI-05-1, 61 NRC 166 (2005)
- Holbrook v. Lykes*, 80 F.3d 777, 780 (3d Cir. 1996)
- courts have applied Federal Rule of Evidence 702 liberally by favoring the admission of any evidence to assist the trier of fact; LBP-05-4, 61 NRC 80 (2005)
- Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-629, 13 NRC 75, 78 (1981)
- to oppose a motion for summary disposition, mere bare assertions, even assertions by an expert, without a fully explained factual basis are insufficient to create a genuine and material factual dispute; LBP-05-4, 61 NRC 100, 107 (2005)
- Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-629, 13 NRC 75, 81 (1981)
- bare assertions and general denials are insufficient to defend against a properly supported motion for summary disposition; LBP-05-4, 61 NRC 81 (2005)
- Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho NM 87174), CLI-01-4, 53 NRC 31, 55 (2001)
- when reviewing a license application filed by a private applicant, as opposed to a federally sponsored project, an agency may give substantial weight to the stated preferences of the applicant with regard to issues such as site selection and facility design; LBP-05-13, 61 NRC 403 (2005)
- Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 71 (2001)
- licensing boards do not sit to "flyspeck" environmental documents or to add details or nuances; CLI-05-4, 61 NRC 13 (2005)
- In re Paoli R.R. Yard PCB Litigation*, 35 F.3d 717, 741-43 (3d Cir. 1994)
- courts have applied Federal Rule of Evidence 702 liberally by favoring the admission of any evidence to assist the trier of fact; LBP-05-4, 61 NRC 80 (2005)
- Indiana Michigan Power Co. v. Department of Energy*, 88 F.3d 1272 (D.C. Cir. 1996)
- DOE was directed to start disposing of spent fuel no later than January 31, 1998; CLI-05-12, 61 NRC 351 n.25 (2005)
- International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-02-21, 56 NRC 161, 165 (2002)
- the Commission views all claims not argued in the Petitioners' appellate brief as waived and does not consider them further; CLI-05-4, 61 NRC 16 n.25 (2005)
- Kannankeril v. Terminix International*, 128 F.3d 802, 806 (3d Cir. 1997)
- courts have applied Federal Rule of Evidence 702 liberally by favoring the admission of any evidence to assist the trier of fact; LBP-05-4, 61 NRC 80 (2005)
- Kannankeril v. Terminix International*, 128 F.3d 802, 807 (3d Cir. 1997)
- where there is a disagreement among competing experts over material facts, a hearing, if permitted by the applicable procedures, is the appropriate forum for the trier of fact to weigh the competing expert opinions on material facts; LBP-05-4, 61 NRC 80, 81 (2005)
- Kansas Gas and Electric Co.* (Wolf Creek Generating Station, Unit 1), ALAB-327, 3 NRC 408, 415 (1976)
- when there is a Commission regulation, duly promulgated, coexisting with other precedent in the general area, the regulation is controlling; CLI-05-1, 61 NRC 172 n.66 (2005)

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- Kleppe v. Sierra Club*, 427 U.S. 390, 410 n.20 (1976)  
NEPA requires, under the cumulative-impacts rubric, the taking into account of future reasonably foreseeable results of current federal licensing actions, and imposes a rule against incrementalism, that is, against analyzing a succession of currently contemplated federal licensing actions in series, as though they were separate, unrelated activities; LBP-05-5, 61 NRC 119 (2005)
- Koden v. Department of Justice*, 564 F.2d 228, 234 (7th Cir. 1977)  
an entity willfully violates a requirement if, regardless of culpable purpose, it intentionally performs an act that it knows is prohibited, or intentionally fails to perform an act that it knows is required, or engages in conduct that may be characterized as careless disregard of requirements that results in a violation of such requirements; LBP-05-2, 61 NRC 63 (2005)
- Lawrence v. Commodity Futures Trading Commission*, 759 F.2d 767, 773 (9th Cir. 1985)  
an entity willfully violates a requirement if, regardless of culpable purpose, it intentionally performs an act that it knows is prohibited, or intentionally fails to perform an act that it knows is required, or engages in conduct that may be characterized as careless disregard of requirements that results in a violation of such requirements; LBP-05-2, 61 NRC 62 (2005)
- Leonard v. Dixie Well Service & Supply, Inc.*, 828 F.2d 291, 294 (5th Cir. 1987)  
summary judgment is not appropriate where it would require a determination of the credibility of witnesses; LBP-05-4, 61 NRC 80 (2005)
- Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 725, 743 (3rd Cir. 1989)  
Council on Environmental Quality regulations are not binding on the NRC when the agency has not expressly adopted them, but they are entitled to considerable deference; LBP-05-13, 61 NRC 403 (2005)  
the agency may decline to examine issues that it, in good faith, considers remote and speculative or inconsequentially small; LBP-05-13, 61 NRC 403 (2005)
- Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-156, 6 AEC 831, 836 (1973)  
the NEPA-required “hard look” at the environmental impacts of a proposed action is subject to a “rule of reason” in that the consideration of environmental impacts need not address every impact that could possibly result, but rather only those that are reasonably foreseeable or have some likelihood of occurring; LBP-05-13, 61 NRC 403 (2005)
- Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-900, 28 NRC 275, 290 (1988)  
guidance is at least implicitly endorsed by the Commission and therefore is entitled to correspondingly special weight; CLI-05-15, 61 NRC 375 n.26 (2005)
- Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), LBP-82-82, 16 NRC 1144, 1163 (1982)  
federal case law, like FOIA Exemption 4 itself, provides guidance to the NRC, though it does not bind the NRC in this area of law; CLI-05-1, 61 NRC 172 (2005)
- Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), LBP-82-82, 16 NRC 1144, 1163-64 (1982)  
NRC has looked for guidance to federal court decisions involving FOIA Exemption 5; CLI-05-1, 61 NRC 163 (2005)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 304 (1997)  
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- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 304-06 (1997)  
the use of service contracts is allowed to show financial assurance; CLI-04-27, 61 NRC 157 (2005)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 306-08 (1997)  
Staff’s detailed technical review of applications together with the Commission’s inspection and enforcement tools provide further assurance that operation will not jeopardize public health and safety; CLI-04-27, 61 NRC 158 (2005)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 307 (1997)  
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- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 308 (1997)  
financial information is of only derivative significance to environmental and safety issues; CLI-05-1, 61 NRC 181 (2005)  
where applicant hopes to use the license itself to attract investors, NRC approves the license subject to conditions preventing the start of operations until the licensee had long-term contracts from potential customers; CLI-04-27, 61 NRC 150 (2005)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998)  
NEPA imposes procedural restraints, calling for an agency to take a “hard look” at the environmental impacts of a proposed action, as well as reasonable alternatives to that action; LBP-05-13, 61 NRC 403 (2005)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 100-110 (1998)  
an environmental justice review under NEPA ensures that the agency considers and publicly discloses factors peculiar to minority or low-income populations that may cause them to suffer harm disproportionate to that suffered by the general population; CLI-05-4, 61 NRC 13 (2005)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 102 (1998)  
the Commission views E.O. 12898 as relevant only to the Commission’s actions under NEPA and not under any other statutory duty; CLI-05-4, 61 NRC 13 (2005)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 103 (1998)  
agencies are given broad discretion in determining how thoroughly to analyze a particular subject; LBP-05-13, 61 NRC 403 (2005)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 104 (1998)  
when reviewing a license application filed by a private applicant, as opposed to a federally sponsored project, an agency may give substantial weight to the stated preferences of the applicant with regard to issues such as site selection and facility design; LBP-05-13, 61 NRC 403 (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)  
the relevant inquiry under NEPA is not whether the assumptions made are perfect or unchallengeable, but whether they are reasonable; LBP-05-13, 61 NRC 440 (2005)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-15, 59 NRC 256, 257 (2004)  
petitioners who live in close proximity to a proposed a facility would have an obvious potential to be affected by the facility; CLI-05-11, 61 NRC 312 (2005)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 225 (2004)  
new arguments may not be raised for the first time in a reply brief; CLI-05-14, 61 NRC 362 n.7 (2005)
- Louisiana Power and Light Co.* (Waterford Steam Electric Station, Unit 3), LBP-82-100, 16 NRC 1550, 1571 n.20 (1982)  
for purposes of the NEPA analysis of this project, the licensing board decision can be considered to have amended the final environmental impact statement *pro tanto*; LBP-05-5, 61 NRC 124 (2005)
- Lujan v. Defenders of Wildlife*, 504 U.S. 555, 564 (1992)  
that individuals have visited areas at issue and expressed generalized intentions of returning to areas at some point do not support a finding of actual or imminent injury; CLI-05-11, 61 NRC 313 (2005)
- M/A-COM Information Systems, Inc. v. United States Department of Health and Human Services*, 656 F. Supp. 691, 692 (D.D.C. 1986)  
it is in the public interest to encourage settlement negotiations and it would impair the ability of the agency to carry out its governmental duties if disclosure of confidential material under FOIA were required; CLI-05-1, 61 NRC 168 n.40 (2005)
- McCurdy v. Wedgewood Capital Management Co.*, 1998 WL 964185 (E.D. Pa. Nov. 16, 1998)  
because both parties suggest that the Court review any contested documents *in camera*, defendant will be ordered to produce one set of the redacted documents in chambers for *in camera* inspection; CLI-05-1, 61 NRC 183 n.130 (2005)
- McDonnell Douglas Corp. v. Department of the Air Force*, 375 F.3d 1182, 1193 (D.C. Cir. 2004)  
the government needs to disclose private parties’ information only if the information informs citizens about what their government is up to; CLI-05-1, 61 NRC 169 (2005)  
the purpose of FOIA and 10 C.F.R. 2.309 is not fostered by disclosure of information about private citizens that reveals little or nothing about an agency’s own conduct; CLI-05-1, 61 NRC 169 (2005)

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- McDonnell Douglas Corp. v. National Aeronautics and Space Administration*, 180 F.3d 303, 305 (D.C. Cir. 1999), *reh'g en banc denied*, No. 98-5251 (D.C. Cir. Oct. 6, 1999)  
under FOIA Exemption 4, the legal definition of “confidential” is information whose disclosure is likely to impair the government’s future ability to obtain necessary information, or impair other government interests such as compliance, program efficiency and effectiveness, and the fulfillment of an agency’s statutory mandate, or cause substantial harm to the competitive position of the person from whom the information was obtained; CLI-05-1, 61 NRC 164 (2005)
- McDonnell Douglas Corp. v. National Aeronautics and Space Administration*, 180 F.3d 303, 306 (D.C. Cir. 1999), *reh'g en banc denied*, No. 98-5251 (D.C. Cir. Oct. 6, 1999)  
in a FOIA Exemption 4 context, disclosure of government contract prices would harm the submitter of that information by permitting its commercial customers to bargain down its prices more effectively; CLI-05-1, 61 NRC 172 (2005)
- McDonnell Douglas Corp. v. National Aeronautics and Space Administration*, 180 F.3d 303, 306, 307 (D.C. Cir. 1999), *reh'g en banc denied*, No. 98-5251 (D.C. Cir. Oct. 6, 1999)  
competitive injury can flow from either competitors or noncompetitors such as customers and suppliers; CLI-05-1, 61 NRC 164 (2005)
- Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), ALAB-772, 19 NRC 1193, 1263 (1984), *rev'd on other grounds*, CLI-85-2, 21 NRC 282 (1985)  
as a general matter, NRC boards may not exercise supervisory authority over the Staff; CLI-05-2, 61 NRC 5 n.13 (2005)
- Nadler v. Federal Deposit Insurance Corp.*, 899 F. Supp. 158, 162, 163 (S.D.N.Y. 1995), *aff'd*, 92 F.3d 93 (2d Cir. 1996)  
disclosure to the public of proprietary information from a settlement would not only undermine one of the principal grounds of that settlement, but would also discourage parties from settling their financial disputes in the future, for fear that the agency would likewise publicly disclose the proprietary information in their settlements; CLI-05-1, 61 NRC 168 (2005)
- Nadler v. Federal Deposit Insurance Corp.*, 92 F.3d 93, 97 (2d Cir. 1996), *aff'g* 899 F. Supp. 158, 163 (S.D.N.Y. 1995)  
the fact that competitive harm would result from active hindrance by an opposing citizens group rather than directly by potential competitors does not affect the fairness considerations that underlie FOIA Exemption 4; CLI-05-1, 61 NRC 173 (2005)
- National Labor Relations Board v. Bell Aerospace Co.*, 416 U.S. 267 (1974)  
the Administrative Procedure Act provides agencies with considerable flexibility to choose between rulemaking and adjudicatory procedures when making law; CLI-05-6, 61 NRC 30 (2005)
- National Parks & Conservation Association v. Kleppe*, 547 F.2d 673, 679 (D.C. Cir. 1976)  
the third prong of FOIA Exemption 4 requires a showing of the existence of competition and the likelihood of substantial competitive injury; CLI-05-1, 61 NRC 164 (2005)
- National Parks & Conservation Association v. Kleppe*, 547 F.2d 673, 687 (D.C. Cir. 1976)  
competitive injury can flow from either competitors or noncompetitors such as customers and suppliers; CLI-05-1, 61 NRC 164 (2005)
- Natural Resources Defense Council v. Callaway*, 524 F.2d 79, 87-88 (2d Cir. 1975)  
NEPA requires, under the cumulative-impacts rubric, the taking into account of future reasonably foreseeable results of current federal licensing actions, and imposes a rule against incrementalism, that is, against analyzing a succession of currently contemplated federal licensing actions in series, as though they were separate, unrelated activities; LBP-05-5, 61 NRC 119 (2005)
- Neely v. St. Paul Fire and Marine Insurance Co.*, 584 F.2d 341, 344 (9th Cir. 1978)  
summary judgment is not appropriate where it would require a determination of the credibility of witnesses; LBP-05-4, 61 NRC 80 (2005)
- New England Power Co.* (NEP, Units 1 and 2), LBP-78-9, 7 NRC 271, 278-79 (1978)  
licensing boards have no jurisdiction over the Staff’s performance of responsibilities that it fulfills outside the hearing process; LBP-05-12, 61 NRC 330 (2005)
- Niagara Mohawk Power Corp. v. Department of Energy*, 169 F.3d 16, 19 (D.C. Cir. 1999)  
all that is required under FOIA Exemption 4 is a showing that a company faces both actual competition and a likelihood of substantial competitive injury; CLI-05-1, 61 NRC 173 (2005)

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- Norfolk Southern Corp. v. Oberly*, 632 F. Supp. 1225, 1243 (D. Del. 1986), *aff'd on other grounds*, 822 F.2d 388 (3d Cir. 1987)  
where there is a disagreement among competing experts over material facts, summary judgment may not be appropriate if it would require the trier of fact to untangle the expert affidavits and decide which experts are more correct; LBP-05-4, 61 NRC 80 (2005)
- North Atlantic Energy Service Corp.* (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 222 (1999)  
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; CLI-04-10, 61 NRC 138 (2005)
- North Atlantic Energy Service Corp.* (Seabrook Station, Unit 1), CLI-99-28, 50 NRC 291, 293 (1999)  
the Commission looks with favor upon settlements; LBP-05-11, 61 NRC 307 (2005)
- Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Unit 3), CLI-00-25, 52 NRC 355, 356 (2000)  
the Board is better positioned than the Commission to make an initial review of applicant's proposed redactions of Board material, given the Board's considerably greater familiarity with the adjudicatory record, and the Board's own authorship of the orders to be redacted; CLI-05-1, 61 NRC 183 (2005)
- Northern States Power Co.* (Monticello Nuclear Generating Plant, Unit 1), ALAB-10, 4 AEC 390, 399, *aff'd*, 4 AEC 409 (Commission 1970)  
the Commission gives considerable weight to the Staff's position on redaction of proprietary information; CLI-05-1, 61 NRC 180 (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 contract requiring the electric utility owner to pay all operating costs incurred by the nonutility operator is enough to establish the financial qualifications of the operator without further proof; CLI-04-27, 61 NRC 157 (2005)  
applicant argues that it need not have agreements in a specific dollar amount because it intends to use passthrough contracts wherein the customer agrees to pay for all associated O&M costs; CLI-04-10, 61 NRC 134 (2005)
- Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-455, 7 NRC 41, 54 (1978), *remanded on other grounds sub nom. Minnesota v. NRC*, 602 F.2d 412 (D.C. Cir. 1979)  
the Commission is not subject to the constitutional "case or controversy" requirement that prevents federal courts from deciding moot questions; CLI-05-14, 61 NRC 362 (2005)
- Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-73-12, 6 AEC 241, 242 (1973), *aff'd sub nom. BPI v. AEC*, 502 F.2d 424 (D.C. Cir. 1974)  
after the moving party makes a proper showing for summary disposition, and the nonmoving party does not establish a genuine issue of material fact, the Board may summarily dispose of the contention on the basis of the pleadings; LBP-05-4, 61 NRC 79 (2005)
- Northern States Power Co. v. Department of Energy*, 128 F.3d 754 (D.C. Cir. 1997)  
DOE was directed to start disposing of spent fuel no later than January 31, 1998; CLI-05-12, 61 NRC 351 n.25 (2005)
- Nuclear Fuel Services, Inc.* (Erwin, Tennessee), CLI-04-13, 59 NRC 244, 248 (2004)  
in nonreactor cases, there is no presumption of standing based upon geographic proximity, absent a determination that the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; CLI-05-11, 61 NRC 311 (2005)  
where there is no obvious potential for radiological harm at a particular distance frequented by a petitioner, it becomes the petitioner's burden to show a specific and plausible means of how the challenged action may harm him or her; CLI-05-11, 61 NRC 312 (2005)
- Ohio Edison Co.* (Perry Nuclear Power Plant, Unit 1), LBP-92-32, 36 NRC 269, 283-84 (1992)  
Commission jurisprudence has long provided that various repose doctrines must give way where changed circumstances or public-interest factors dictate; CLI-04-27, 61 NRC 154 (2005)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-410, 5 NRC 1398, 1406 (1977), *review denied*, CLI-77-23, 6 NRC 455 (1977)  
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- the Licensing Board is in the best position to determine the most appropriate circumstances in which safeguards information may be viewed; CLI-05-2, 61 NRC 7 (2005)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-03-2, 57 NRC 19, 26 (2003)
- the Commission has long looked for guidance to current judicial concepts of standing, which require a concrete and particularized injury that is fairly traceable to the challenged action and likely to be redressed by a favorable decision; CLI-05-11, 61 NRC 311 (2005)
- Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 732 n.67 (1985)
- where the opinions of two experts may appear to be in conflict with each other, Federal Rule of Evidence 702 may also serve as guidance in determining whether the experts' opinions preclude summary disposition of the contention; LBP-05-4, 61 NRC 80 (2005)
- Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), LBP-82-43A, 15 NRC 1423, 1467-68 (1982)
- "tiering" or "incorporation by reference" allows the Staff to adopt the underlying scientific data and inferences from the analysis conducted by the other agency without independent review, so long as it exercises independent judgment with respect to conclusions about the environmental impacts relative to the current proposed agency action; LBP-05-13, 61 NRC 405 (2005)
- Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 58 (1974)
- applicants do not have to have all their other permits in hand before they can obtain an agency license; LBP-05-5, 61 NRC 126 (2005)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-98-13, 48 NRC 26, 30-31 (1998)
- the Commission has long looked for guidance to current judicial concepts of standing, which require a concrete and particularized injury that is fairly traceable to the challenged action and likely to be redressed by a favorable decision; CLI-05-11, 61 NRC 311 (2005)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-1, 53 NRC 1, 5 (2001)
- the standards of section 2.786(g) are applied to discretionary interlocutory appeals; CLI-05-2, 61 NRC 5 n.14 (2005)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-9, 53 NRC 232, 235-36 (2001)
- commitments made by a licensee orally at a hearing are no less binding because they are not made in writing; LBP-05-10, 61 NRC 285 (2005)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-12, 53 NRC 459, 461 (2001)
- in granting review of certified questions, the Commission follows its customary practice of accepting Board-certified questions; CLI-05-9, 61 NRC 236 (2005)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 264 (2001)
- guidance documents do not have the force and effect of law; CLI-05-15, 61 NRC 375 n.26 (2005)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-20, 56 NRC 147 (2002)
- an environmental justice review under NEPA ensures that the agency considers and publicly discloses factors peculiar to minority or low-income populations that may cause them to suffer harm disproportionate to that suffered by the general population; CLI-05-4, 61 NRC 13 (2005)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348 (2002)
- NEPA's twin goals are to inform the agency and the public about the environmental effects of a project; CLI-05-4, 61 NRC 13 (2005)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348-49 (2002)
- in conducting its NEPA review, the NRC Staff is governed by a rule of reason whereby only reasonably foreseeable impacts need be addressed; LBP-05-8, 61 NRC 208 (2005)

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- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-4, 59 NRC 31, 35-36 (2004)  
the Commission may grant review of initial board decisions (or partial initial decisions) based on any consideration it deems to be in the public interest; CLI-04-10, 61 NRC 132 (2005)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage installation), CLI-04-9, 59 NRC 120, 123-26 (2004)  
reopening the record requires a showing that the new information will likely trigger a different result; CLI-05-12, 61 NRC 350 (2005)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 131 (2004)  
if a contention either failed to raise a material legal or factual dispute or was outside the scope of the hearing, or both, that contention is inadmissible; CLI-05-4, 61 NRC 16 (2005)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 510 (2001)  
where there is a disagreement among competing experts over material facts, summary judgment may not be appropriate if it would require the trier of fact to untangle the expert affidavits and decide which experts are more correct; LBP-05-4, 61 NRC 80 (2005)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-02-20, 56 NRC 169, 181-84 (2002)  
under principles of collateral estoppel, losing parties are not free to relitigate already-decided questions in subsequent cases involving the same parties; CLI-05-1, 61 NRC 165 (2005)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-02-20, 56 NRC 169, 182 (2002)  
the collateral estoppel doctrine does not call for an inquiry into the correctness of the prior decision; CLI-05-1, 61 NRC 165 (2005)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-03-30, 58 NRC 454, 473-74 (2003)  
in the context of an NRC adjudicatory proceeding, even if an EIS prepared by the Staff is found to be inadequate in certain respects, the ultimate NEPA judgments regarding a facility can be made on the basis of the entire record before a presiding officer, such that the EIS can be deemed to be amended pro tanto; LBP-05-13, 61 NRC 404 (2005)
- Public Citizen Health Research Group v. Food and Drug Administration*, 185 F.3d 898, 904 (D.C. Cir. 1999)  
under FOIA Exemption 4, the public interest to be weighed in this balance has been narrowly defined as an interest in determining the bases for and results of agency action, and does not include incidental benefits from disclosure that may be enjoyed by members of the public; CLI-05-1, 61 NRC 180 n.115 (2005)
- Public Citizen Health Research Group v. Food and Drug Administration*, 704 F.2d 1280, 1291 (D.C. Cir. 1983)  
all that is required under FOIA Exemption 4 is a showing that a company faces both actual competition and a likelihood of substantial competitive injury; CLI-05-1, 61 NRC 173 (2005)  
competitive harm in the FOIA context is limited to harm flowing from the affirmative use of proprietary information by competitors; CLI-05-1, 61 NRC 172 (2005)  
the Commission need not engage in a sophisticated economic analysis of the substantial competitive harm that might result from disclosure of proprietary information; CLI-05-1, 61 NRC 177 n.101 (2005)  
the importance of honoring the settling parties' expectations of confidentiality is particularly strong where both parties to the settlement oppose disclosure of its terms on grounds of potential financial harm; CLI-05-1, 61 NRC 168 n.38 (2005)
- Public Citizen Health Research Group v. Food and Drug Administration*, 704 F.2d 1280, 1291 n.30 (D.C. Cir. 1983)  
competitive injury is limited to injury directly caused by a competitor's use of the information; CLI-05-1, 61 NRC 164 (2005)



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- Public Citizen Health Research Group v. National Institutes of Health*, 209 F. Supp. 2d 37, 46 (D.D.C. 2002)  
all that is required under FOIA Exemption 4 is a showing that a company faces both actual competition and a likelihood of substantial competitive injury; CLI-05-1, 61 NRC 173 (2005)
- Public Citizen Health Research Group v. National Institutes of Health*, 209 F. Supp. 2d 37, 53 (D.D.C. 2002)  
disclosure to the public of proprietary information from a settlement would not only undermine one of the principal grounds of that settlement, but would also discourage parties from settling their financial disputes in the future, for fear that the agency would likewise publicly disclose the proprietary information in their settlements; CLI-05-1, 61 NRC 168 (2005)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-939, 32 NRC 165, 167 n.3 (1990)  
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- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-78-1, 7 NRC 1, 8-9 (1978)  
NRC is authorized to impose appropriate financial qualifications standards on licensees; CLI-04-27, 61 NRC 149 (2005)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-87-2, 25 NRC 267 (1987)  
the Commission has the authority to review interlocutory and final licensing board decisions on its own motion; CLI-05-14, 61 NRC 362 (2005)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-20, 30 NRC 231, 236 n.8, 244 (1989)  
financial information is of only derivative significance to environmental and safety issues; CLI-05-1, 61 NRC 181 (2005)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-88-8, 27 NRC 293, 299 (1988)  
FOIA Exemption 4 is not by its terms limited to considerations of competitive harm; CLI-05-1, 61 NRC 173 (2005)
- Puerto Rico Electric Power Authority* (North Coast Nuclear Plant, Unit 1), ALAB-605, 12 NRC 153, 154 (1980)  
adjudicatory tribunals have inherent authority to dismiss those matters placed before them that have been mooted by supervening developments; LBP-05-6, 61 NRC 187 n.2 (2005)
- Quivira Mining Co.* (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 6 (1998)  
for standing, the potential for injury must be actual or imminent; CLI-05-11, 61 NRC 311 (2005)
- Reiter v. Sonotone Corp.*, 442 U.S. 330, 339 (1979)  
canons of construction ordinarily suggest that terms connected by “or” be given separate meanings, unless the context dictates otherwise; LBP-05-10, 61 NRC 301 (2005)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 339 (1989)  
NEPA’s twin goals are to inform the agency and the public about the environmental effects of a project; CLI-05-4, 61 NRC 13 (2005)
- Robinson v. Shell Oil Co.*, 519 U.S. 337, 340 (1997)  
if the language is unambiguous and the regulatory scheme is coherent and consistent, a board’s inquiry into the meaning of the regulation must cease; LBP-05-10, 61 NRC 299 (2005)
- Robinson v. Shell Oil Co.*, 519 U.S. 337, 341 (1997)  
the plainness or ambiguity of statutory language is determined by reference to the language itself, the specific context in which that language is used, and the broader context of the statute or regulation as a whole; LBP-05-10, 61 NRC 299 (2005)
- Rockwell International Corp.* (Rocketdyne Division), CLI-90-5, 31 NRC 337 (1990)  
a presiding officer’s encouragement toward settlement that is reasonably and responsibly offered can be of significant benefit to the settlement process; LBP-05-1, 61 NRC 50 n.8 (2005)
- Rohrbough by Rohrbough v. Wyeth Laboratories, Inc.*, 719 F. Supp. 470, 475 (N. D. W. Va. 1989), *aff’d on other grounds*, 916 F.2d 970 (4th Cir. 1990)  
the nonmoving party cannot avoid summary judgment by presenting an unsupported opinion of an expert; LBP-05-4, 61 NRC 81, 107 (2005)

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- Securities and Exchange Commission v. Chenery Corp.*, 332 U.S. 194 (1947)  
the Administrative Procedure Act provides agencies with considerable flexibility to choose between rulemaking and adjudicatory procedures when making law; CLI-05-6, 61 NRC 30 (2005)
- Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 71 (1994)  
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- Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-97-13, 46 NRC 195, 205 (1997)  
Commission decisions have consistently expressed support for settlements; CLI-05-1, 61 NRC 168 (2005)  
in approving a proposed settlement, the licensing board is required to give due consideration to the public interest; LBP-05-11, 61 NRC 308 (2005)
- Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-5, 39 NRC 54, 73 (1994)  
in conformity with the general rules of construction for statutory and regulatory provisions, different terms should be accorded different meanings; LBP-05-7, 61 NRC 195 (2005)
- Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-17, 39 NRC 359, 361, *aff'd*, CLI-94-11, 40 NRC 55 (1994)  
because the burden of proof is on the movant, the evidence submitted must be construed in favor of the party in opposition thereto, who receives the benefit of any favorable inferences that can be drawn; LBP-05-4, 61 NRC 79 (2005)
- Silverman v. Commodity Futures Trading Commission*, 549 F.2d 28, 31 (7th Cir. 1977)  
an entity willfully violates a requirement if, regardless of culpable purpose, it intentionally performs an act that it knows is prohibited, or intentionally fails to perform an act that it knows is required, or engages in conduct that may be characterized as careless disregard of requirements that results in a violation of such requirements; LBP-05-2, 61 NRC 62-63 (2005)
- Starkey v. United States Department of the Interior*, 238 F. Supp. 2d 1188, 1195 (S.D. Cal. 2002)  
disclosure requests have been refused where the information's release will harm the future negotiating position of a party; CLI-05-1, 61 NRC 169 (2005)
- State Farm Fire and Casualty Co. v. Miles*, 730 F. Supp. 1462, 1473 (S.D. Ind. 1990), *aff'd*, 930 F.2d 25 (7th Cir. 1991)  
the nonmoving party cannot avoid summary judgment by presenting an unsupported opinion of an expert; LBP-05-4, 61 NRC 81 (2005)
- Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 20, 23, 25 (1998)  
the Commission's practice is to address novel legal or policy issues and to provide appropriate guidance; CLI-05-14, 61 NRC 362 (2005)
- Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 23 (1998)  
the Commission encourages boards and presiding officers to certify novel legal or policy questions early in a proceeding; CLI-05-14, 61 NRC 364 (2005)
- Sua Contra La Contaminacion v. EPA*, 202 F.3d 443, 449 (1st Cir. 2002)  
Executive Order 12898, which directed agencies to take into account environmental justice issues in exercising their statutory duties, created no new substantive right; CLI-05-4, 61 NRC 13 (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)  
although the Commission has the authority to reject or modify a licensing board's factual finding, it will not do so simply because it might have reached a different result; CLI-05-1, 61 NRC 174 (2005)
- Texas Committee on Natural Resources v. Van Winkle*, 197 F. Supp. 2d 586 (N.D. Tex. 2002)  
NEPA requires, under the cumulative-impacts rubric, the taking into account of future reasonably foreseeable results of current federal licensing actions, and imposes a rule against incrementalism, that is, against analyzing a succession of currently contemplated federal licensing actions in series, as though they were separate, unrelated activities; LBP-05-5, 61 NRC 119 (2005)
- Texas Utilities Generating Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), ALAB-714, 17 NRC 86, 93 (1983)  
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- Wisconsin Electric Power Co.* (Point Beach Nuclear Plant, Units 1 and 2), LBP-82-42, 15 NRC 1307, 1319 (1982)  
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- Wisconsin Electric Power Co.* (Point Beach Nuclear Plant, Units 1 and 2), LBP-82-42, 15 NRC 1307, 1333 (1982)  
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- Wisconsin Electric Power Co.* (Point Beach Nuclear Plant, Units 1 and 2), LBP-82-42, 15 NRC 1307, 1337-38 (1982)  
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- Wisconsin Electric Power Co. v. Department of Energy*, 211 F.3d 646 (D.C. Cir. 2000)  
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- X-Ray Engineering Co.*, 1 AEC 553, 555 (1960)  
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- Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 204-05 (1998)  
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- Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 206-07 (1998)  
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- 10 C.F.R. 2.104(b)(1)  
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- 10 C.F.R. 2.104(b)(1)(i)(d)(2)  
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- 10 C.F.R. 2.104(b)(1)(i)-(iii)  
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- 10 C.F.R. 2.104(b)(1)(iv)  
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- 10 C.F.R. 2.104(b)(1)-(3)  
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- 10 C.F.R. 2.104(b)(2)  
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- 10 C.F.R. 2.104(b)(3)  
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- 10 C.F.R. 2.104(b)(3)(iii)  
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- 10 C.F.R. 2.202(a)  
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- 10 C.F.R. 2.202(a)(1), (2)  
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- 10 C.F.R. 2.202(a)(5)  
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- 10 C.F.R. 2.202(c)(1)  
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- 10 C.F.R. 2.202(c)(2)(i)  
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- 10 C.F.R. 2.203  
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- 10 C.F.R. 2.206  
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- 10 C.F.R. 2.304(f)  
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- 10 C.F.R. 2.309(c)  
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- 10 C.F.R. 2.309(d)  
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- 10 C.F.R. 2.309(f)  
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- 10 C.F.R. 2.309(f)(1)  
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- 10 C.F.R. 2.309(i)  
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- 10 C.F.R. 2.311(c)  
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- 10 C.F.R. 2.318, 2.319  
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- 10 C.F.R. 2.319(l)  
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- 10 C.F.R. 2.319(l), 2.323(f)  
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- 10 C.F.R. 2.326  
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- 10 C.F.R. 2.332(d)  
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- 10 C.F.R. 2.338  
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- 10 C.F.R. 2.338(h)  
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- 10 C.F.R. 2.341  
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- 10 C.F.R. 2.341(f)  
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- 10 C.F.R. 2.390(a)(3), 2.390(f), 2.705(c), 2.709(f)  
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- 10 C.F.R. 2.714  
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- 10 C.F.R. 2.714(a)(1)  
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- 10 C.F.R. 2.714(b)(2)  
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- 10 C.F.R. 2.714(b)(2)(ii)  
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- 10 C.F.R. 2.714(d)(2)(ii)  
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- 10 C.F.R. 2.714a(c)  
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- 10 C.F.R. 2.718(g)  
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- 10 C.F.R. 2.722  
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- 10 C.F.R. 2.730(f)  
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- 10 C.F.R. 2.734  
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- 10 C.F.R. 2.734(a)  
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- 10 C.F.R. 2.734(a)(2)-(3)  
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- 10 C.F.R. 2.734(a)(3)  
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- 10 C.F.R. 2.734(d)  
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- 10 C.F.R. 2.744(e)  
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- 10 C.F.R. 2.749  
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- 10 C.F.R. 2.749(a)  
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- 10 C.F.R. 2.749(b)  
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- 10 C.F.R. 2.749(d)  
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- 10 C.F.R. 2.759  
NRC policy of encouraging settlement not only can lead to reducing the costs and burdens of litigation, but can also bring more satisfying outcomes than those produced by litigation, allowing both sides to a controversy to reconcile their philosophical differences by reaching mutually agreeable practical resolutions; LBP-05-1, 61 NRC 50 (2005)  
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- 10 C.F.R. 2.764(c)  
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- 10 C.F.R. 2.772(b)  
the Secretary of the Commission has the authority to rule on procedural matters such as motions for enlargement of time or to expand the page numbers of briefs; CLI-05-12, 61 NRC 349 (2005)
- 10 C.F.R. 2.786  
the Commission has the authority to review interlocutory and final licensing board decisions on its own motion; CLI-05-14, 61 NRC 362 (2005)
- 10 C.F.R. 2.786(a)  
in exercise of its sua sponte authority, the Commission decides to review an unappealed Board order; CLI-05-10, 61 NRC 239 (2005)

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- 10 C.F.R. 2.786(b)(3)  
within 10 days after service of a petition for review, any party to the proceeding may file an answer supporting or opposing Commission review; LBP-05-1, 61 NRC 52 (2005)
- 10 C.F.R. 2.786(b)(4)  
although a proceeding is terminated for nonprosecution, any party may file a petition for review with the Commission on the grounds specified in; LBP-05-1, 61 NRC 52 (2005)  
Commission review is warranted when the petitioner demonstrates that the Board made a clear error in a finding of fact, an error of law, a prejudicial procedural error, or where the Board decision raises a substantial and important question of law, policy, or discretion; CLI-04-10, 61 NRC 132 (2005); CLI-05-12, 61 NRC 350 (2005)  
the Commission may grant review of initial board decisions, or partial initial decisions, based on any consideration it deems to be in the public interest; CLI-04-10, 61 NRC 132 (2005)
- 10 C.F.R. 2.786(b)(4)(i), *recodified at* 10 C.F.R. § 2.341(b)(4)(i)  
in challenges to the board's disclosure-related factual findings, the Commission traditionally defers to the board, and will reverse only if the findings are clearly erroneous; CLI-05-1, 61 NRC 174 (2005)
- 10 C.F.R. 2.786(b)(5), *recodified at* 10 C.F.R. § 2.341(b)(5)  
a petition for review will not be granted to the extent that it relies on matters that could have been but were not raised before the presiding officer; CLI-05-1, 61 NRC 182 (2005)
- 10 C.F.R. 2.786(e)  
a party has 10 days after a Commission decision to petition for reconsideration; CLI-04-27, 61 NRC 153 (2005)
- 10 C.F.R. 2.786(g)  
serious, immediate, and irreparable harm is one of the grounds for granting discretionary interlocutory review; CLI-05-2, 61 NRC 5 n.14 (2005)  
serious, immediate, and irreparable harm is one of the grounds for Commission discretionary review of certified questions and referred rulings; CLI-05-2, 61 NRC 5 n.14 (2005)
- 10 C.F.R. 2.790  
this section embodies the standards of Exemption 4 of the Freedom of Information Act; CLI-05-1, 61 NRC 163 (2005)
- 10 C.F.R. 2.790(a)(4)  
the agency will withhold from the public, commercial or financial information obtained from a person and privileged or confidential; CLI-05-1, 61 NRC 162 (2005)
- 10 C.F.R. 2.790(b)(1)(iii)  
applicants seeking redaction of proprietary information must address the criteria of section 2.790(b)(4)(i)-(v) with specificity; CLI-05-1, 61 NRC 163 (2005)
- 10 C.F.R. 2.790(b)(4)  
applicant's own actions and practice in publishing information on its Web site or newsletters renders redaction inappropriate for that information; CLI-05-1, 61 NRC 176-77 (2005)  
five factors are considered in making a determination about whether to withhold from the public, commercial or financial information obtained from a person and privileged or confidential; CLI-05-1, 61 NRC 162 (2005)
- 10 C.F.R. 2.790(b)(4)(i)-(v)  
applicants seeking redaction of proprietary information must address these criteria with specificity; CLI-05-1, 61 NRC 162-63 (2005)
- 10 C.F.R. 2.790(b)(4)(v)  
although disclosure of the settlement-related information might cause applicant "financial" harm, the harm would not be "competitive," and therefore would not cause substantial harm to the competitive position of the owner of the information; CLI-05-1, 61 NRC 167 (2005)
- 10 C.F.R. 2.790(b)(5)  
for the information that it found privileged or confidential, the board balances the right of the public to be fully apprised as to the bases for and effects of applicant's proposed action against the demonstrated concern for protection of a competitive position; CLI-05-1, 61 NRC 162, 163, 179 (2005)  
where settlement terms shed little or no light on the NRC's conduct or decision, a balancing of the public's need for this information against applicant's need to keep the information out of the public domain favors the latter interest; CLI-05-1, 61 NRC 169 (2005)

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- 10 C.F.R. 2.802  
members of the public are free to submit views on the proper scope or content of the NRC's security requirements through a petition for rulemaking; CLI-05-6, 61 NRC 42 n.22 (2005)  
State's request is too vague to satisfy NRC's established process for seeking a rulemaking; CLI-05-12, 61 NRC 355 n.37 (2005)
- 10 C.F.R. 2.804  
if the Commission's security order is a rule, then notice-and-comment procedures apply to the proceeding, but if the order is a form of adjudication, those procedures are not required; CLI-05-6, 61 NRC 39 (2005)
- 10 C.F.R. 2.1202(a), 2.1205(m)  
licenses may be issued prior to, but subject to the outcome of, evidentiary hearings yet to be scheduled; LBP-05-12, 61 NRC 331 (2005)  
neither the filing nor the grant of the hearing requests precluded the issuance of the sought license amendments; LBP-05-8, 61 NRC 204 n.3 (2005)
- 10 C.F.R. 2.1233  
parties only have the right to file written presentations supported by affidavits and documentary material with the possibility of the presiding officer questioning the parties' experts at an oral session; LBP-05-4, 61 NRC 81 (2005)
- 10 C.F.R. 2.1251(a)  
an order terminating the proceeding constitutes the final action of the Commission within 30 days of the date the order was issued unless a petition for review is filed or the Commission directs otherwise; LBP-05-1, 61 NRC 51 (2005)
- 10 C.F.R. 2.1253  
although a proceeding is terminated for nonprosecution, any party may file a petition for review with the Commission on the grounds specified in section 2.786(b)(4); LBP-05-1, 61 NRC 52 (2005)  
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-05-1, 61 NRC 52 (2005)
- 10 C.F.R. Part 2, App. A, § V(g)(5)  
the board chairman should formally close the hearing; LBP-05-5, 61 NRC 112 n.3 (2005)
- 10 C.F.R. 11.9  
exemptions from the requirements of Part 11 may be granted if they are authorized by law and will not constitute an undue risk to the common defense and security; LBP-05-10, 61 NRC 262 (2005)  
licensee has met its burden of showing by a preponderance of the evidence that its requested exemptions are appropriate; LBP-05-10, 61 NRC 245, 303 (2005)
- 10 C.F.R. 11.11(b)  
licensee employees involved with mixed oxide fuel activities will have successfully satisfied a government clearance similar to the required NRC clearances; LBP-05-10, 61 NRC 274, 275 (2005)
- 10 C.F.R. 11.15(c)(3)  
the DOE-L security clearance is about the equivalent of an NRC-R clearance; LBP-05-10, 61 NRC 274 (2005)
- 10 C.F.R. Part 20, Subpart E  
with regard to site remediation plans, information submitted by the licensee should discuss in detail how facility and site areas will be remediated to meet the NRC's release criteria; CLI-05-15, 61 NRC 376 (2005)
- 10 C.F.R. Part 26  
all individuals permitted unescorted access, including both contractors and licensee employees, must undergo background and criminal history checks; LBP-05-10, 61 NRC 274 (2005)
- 10 C.F.R. 30.9(a)  
a civil penalty was imposed on a licensee when its employee failed to provide information to the NRC that was complete and accurate in all respects; LBP-05-11, 61 NRC 307 (2005)
- 10 C.F.R. 30.11  
Staff denies license-renewal requests because licensee failed to demonstrate that an exemption from the decommissioning funding assurance requirements was warranted pursuant to; LBP-05-2, 61 NRC 55 n.2 (2005)

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- 10 C.F.R. 30.11(a)  
the Commission may exempt a license applicant from decommissioning funding assurance requirements if it determines that an exemption is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest; LBP-05-2, 61 NRC 56 (2005)
- 10 C.F.R. 30.32  
Staff denies license-renewal requests because licensee failed to comply with substantive provisions of its licenses and could not comply with the decommissioning funding assurance requirements of; LBP-05-2, 61 NRC 55 n.2 (2005)  
the holder of a materials license must, as a condition of licensing, certify that it has provided financial assurance for the estimated cost of decommissioning its facility by prepayment of monies into a segregated fund or a surety, insurance, or other guarantee method; LBP-05-2, 61 NRC 56 (2005)
- 10 C.F.R. 30.32(h)  
any failure by licensee to make a payment to the decommissioning fund trust when due that has not been cured by payment in full within 90 days of the due date shall result in the rescission of the exemption from; LBP-05-14, 61 NRC 452 (2005)
- 10 C.F.R. 30.35  
licensee's deliberate failure to make the required payments to the trust fund voided its exemption from the financial assurance requirements and placed the licensee in continued violation of the license conditions; LBP-05-2, 61 NRC 58 (2005); LBP-05-14, 61 NRC 450, 451 (2005)  
Staff denies license-renewal requests because licensee failed to comply with substantive provisions of its licenses and could not comply with the decommissioning funding assurance requirements of; LBP-05-2, 61 NRC 55 n.2 (2005)  
the holder of a materials license must, as a condition of licensing, certify that it has provided financial assurance for the estimated cost of decommissioning its facility by prepayment of monies into a segregated fund or a surety, insurance, or other guarantee method; LBP-05-2, 61 NRC 56 (2005)
- 10 C.F.R. 30.35(a)  
any failure by licensee to make a payment to the decommissioning fund trust when due that has not been cured by payment in full within 90 days of the due date shall result in the rescission of the exemption from; LBP-05-14, 61 NRC 452 (2005)
- 10 C.F.R. Part 50  
licensee's physical protection plan is required to protect against the design basis threat of radiological sabotage by reason of the licensing requirements for nuclear power plants; LBP-05-10, 61 NRC 267 (2005)
- 10 C.F.R. 50.33(f)(2)  
operating license applicants (other than utilities) are required to submit estimates for the first 5 years of costs, along with the source of funds to pay for them; CLI-04-27, 61 NRC 150 (2005)
- 10 C.F.R. 50.35(a)  
the focus of the existing section 2.104 is power reactor proceedings, in particular construction permit proceedings; LBP-05-7, 61 NRC 192 (2005)
- 10 C.F.R. 50.40(a), 50.57(a)(3)  
there must be "reasonable assurance" that the activities at issue will not endanger the health and safety of the public; LBP-05-10, 61 NRC 262 (2005)
- 10 C.F.R. 50.58(b)(6)  
Staff's significant hazards consideration determination is final, subject only to the Commission's discretion, on its own initiative, to review the determination; CLI-05-14, 61 NRC 361 n.2 (2005)
- 10 C.F.R. 50.72  
licensee is required to notify NRC about spent fuel rod pieces that were not in their documented location in the spent fuel pool; DD-05-1, 61 NRC 228 (2005)
- 10 C.F.R. 50.82(a)(9)  
a license termination application must be supported by a license termination plan; CLI-05-15, 61 NRC 370, 372 (2005)  
the key question at the LTP submission stage is whether the site characterization is sufficiently detailed to allow evaluation of the adequacy of each element prescribed by; CLI-05-15, 61 NRC 381 (2005)

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- 10 C.F.R. 50.82(a)(9)(ii)  
“site characterization” and “plans for site remediation” for purposes of meeting LTP requirements are interpreted; CLI-05-15, 61 NRC 373, 374 (2005)
- 10 C.F.R. 50.82(a)(9)(ii)(A)-(H)  
the content of license termination plans is described; CLI-05-15, 61 NRC 372 (2005)
- 10 C.F.R. 50.82(a)(10)  
license termination plans are implemented by license amendment not only when the LTP is initially approved but also later if new developments require a license amendment to approve modifications to the LTP that cannot be considered within the scope of the original amendment approving the LTP; CLI-05-15, 61 NRC 380 n.46 (2005)  
license termination plans are treated as license amendments; CLI-05-15, 61 NRC 370 n.4 (2005)  
license termination plans must demonstrate that the remainder of decommissioning activities will be performed in accordance with the regulations, will not be inimical to the common defense and security or to the health and safety of the public, and will not have a significant effect on the quality of the environment; CLI-05-15, 61 NRC 372 (2005)
- 10 C.F.R. 50.90  
whenever a licensee wishes to amend the license, including technical specifications in the license, an application for amendment must be filed, fully describing the changes desired; LBP-05-10, 61 NRC 261-62 (2005)
- 10 C.F.R. 50.92(a)  
determinations on whether to grant an applied-for license amendment are to be guided by the considerations that govern the issuance of initial licenses or construction permits to the extent applicable and appropriate; LBP-05-10, 61 NRC 262, 303 (2005)
- 10 C.F.R. 51.14(b)  
NEPA requires, under the cumulative-impacts rubric, the taking into account of future reasonably foreseeable results of current federal licensing actions, and imposes a rule against incrementalism, that is, against analyzing a succession of currently contemplated federal licensing actions in series, as though they were separate, unrelated activities; LBP-05-5, 61 NRC 119 (2005)
- 10 C.F.R. 51.20  
an applicant for a Part 70 license for a uranium enrichment facility is required to file an environmental report with its application; LBP-05-13, 61 NRC 404 (2005)  
an EIS must be prepared where the proposed action is a major federal action significantly affecting the quality of the human environment or where the Commission, in its discretion, determines that an EIS is required; LBP-05-8, 61 NRC 207 (2005)
- 10 C.F.R. 51.20(b)(10)  
NRC Staff must review the applicant’s environmental report and prepare a draft environmental impact statement; LBP-05-13, 61 NRC 404 (2005)
- 10 C.F.R. 51.21, 51.22(a)-(d)  
there are certain such actions that do not require an environmental review; LBP-05-8, 61 NRC 207 (2005)
- 10 C.F.R. 51.23  
for purposes of this and previous NRC licensing proceedings, the Commission’s waste confidence rule has required that analysis be conducted on the assumption the Yucca Mountain waste repository will be built; LBP-05-5, 61 NRC 120 (2005)
- 10 C.F.R. 51.30(a)  
an environmental assessment must include a list of agencies and persons consulted, and identification of sources used; LBP-05-8, 61 NRC 207 (2005)
- 10 C.F.R. 51.32(a)  
when the Staff determines that a finding of no significant environmental impact is appropriate, its finding to that effect must state that the finding and any related environmental documents are available for public inspection and where the documents may be inspected; LBP-05-8, 61 NRC 208 (2005)
- 10 C.F.R. 51.45(b)  
the 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-05-13, 61 NRC 404 (2005)

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- 10 C.F.R. 51.45(b)(1)-(5)  
the applicant's environmental report must discuss the environmental impact of the proposed action including any unavoidable adverse impacts, alternatives to the proposed action, the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitment of resources; LBP-05-13, 61 NRC 404 (2005)
- 10 C.F.R. 51.50  
an applicant for a Part 70 license for a uranium enrichment facility is required to file an environmental report with its application; LBP-05-13, 61 NRC 404 (2005)
- 10 C.F.R. 51.52(c) n.4  
this makes the facility unlike a nuclear reactor, with respect to which the environmental risk of radiological effects associated with decades of operation dwarfs any similar risks associated with transportation; LBP-05-5, 61 NRC 119 n.19 (2005)
- 10 C.F.R. 51.70(b)  
although the draft EIS may rely in part on applicant's environmental report, the Staff must independently evaluate and be responsible for the reliability of all information used in the DEIS; LBP-05-13, 61 NRC 405 (2005)
- 10 C.F.R. 51.71(d)  
the Staff's EIS must consider and weigh the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives for reducing or avoiding adverse environmental impacts; LBP-05-13, 61 NRC 404 (2005)
- 10 C.F.R. 51.73, 51.91  
the DEIS is distributed for public comment and, based on the comments received, a review of information provided by the applicant, and supplemental independent information and analysis, the Staff prepares and issues a final environmental impact statement; LBP-05-13, 61 NRC 405 (2005)
- 10 C.F.R. 51.102(c), 51.104(a)(3)  
for purposes of the NEPA analysis of this project, the licensing board decision can be considered to have amended the FEIS *pro tanto*; LBP-05-5, 61 NRC 124 (2005)
- 10 C.F.R. 51.105(a)(1)-(3)  
a question is certified to the Commission about the appropriate scope of review for licensing boards in making the three "baseline" NEPA findings required by; LBP-05-7, 61 NRC 198 (2005)  
regardless of whether the mandatory hearings are contested or uncontested, the board must make the three basic or "baseline" NEPA findings; LBP-05-7, 61 NRC 192 (2005)
- 10 C.F.R. Part 51, App. A, § 1(b)  
it is within the agency's discretion to rely on an EIS, draft or otherwise, prepared by another federal agency if such reliance will aid in the presentation of issues, eliminate repetition, or reduce the length of an EIS; LBP-05-13, 61 NRC 405 (2005)
- 10 C.F.R. 52.17(a)(1)  
at the ESP stage, the applicant is not required to know or to specify the type or design of a nuclear reactor to be used at the site, but must provide the parameters of the types of reactor or reactors for which it seeks site approval; LBP-05-7, 61 NRC 193 n.4 (2005)
- 10 C.F.R. 52.18  
in the ESP context, the draft and final environmental impact statement need not include an assessment of the benefits of the proposed action, but must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed; LBP-05-7, 61 NRC 198 n.14 (2005)
- 10 C.F.R. 52.21  
an early site permit is a partial nuclear power plant construction permit; LBP-05-7, 61 NRC 193 n.4 (2005)  
the mandatory hearing requirement is applicable to both early site permit and uranium enrichment facility proceedings; LBP-05-7, 61 NRC 190 (2005)
- 10 C.F.R. 52.79  
ESP notices need not provide an outline of a proposed facility's design major features or components, safety features or components, and technical qualifications that otherwise would need to be specified for a construction permit application; LBP-05-7, 61 NRC 193 n.4 (2005)

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- 10 C.F.R. 60.2  
depleted uranium is not high-level waste, spent nuclear fuel, 11e(2) byproduct material, or transuranic waste; CLI-05-5, 61 NRC 34 (2005)
- 10 C.F.R. Part 61  
an approach by applicant to transfer to DOE for disposal by DOE of applicant's depleted tails would constitute a plausible strategy for disposal of the depleted tails if the tails could be considered low-level radioactive waste; CLI-05-5, 61 NRC 25 (2005)
- 10 C.F.R. 61.2  
depleted uranium tails are to be considered low-level radioactive waste within the meaning of; CLI-05-5, 61 NRC 25, 28 (2005)  
only a geologic repository, which is regulated under Part 60 or 63, is not encompassed by the Part 61 definition of "land disposal" facilities; CLI-05-5, 61 NRC 27, 29 (2005)  
the term "waste" is very clearly a subset of the larger category of low-level waste, and refers specifically to those low-level wastes that are acceptable for land disposal under Part 61; CLI-05-5, 61 NRC 28 (2005)  
transuranic waste is not low-level radioactive waste; CLI-05-5, 61 NRC 30 (2005)
- 10 C.F.R. 61.7(a)  
low-level radioactive wastes are not limited to wastes suitable for near-surface disposal; CLI-05-5, 61 NRC 31 (2005)  
near-surface methods of disposal involve disposal at a depth of approximately 30 meters, although burial deeper than 30 meters may also be acceptable; CLI-05-5, 61 NRC 26 (2005)
- 10 C.F.R. 61.7(b)(1), (2)  
specific safety goals for near-surface disposal include protecting against inadvertent intruders and minimizing water's access to waste to limit the potential for migration of radionuclides; CLI-05-5, 61 NRC 27 (2005)
- 10 C.F.R. 61.7(b)(5)  
greater-than-Class-C low-level waste may be acceptable for disposal in a near-surface disposal facility with special design provisions, or acceptable for land disposal in an intermediate land disposal facility; CLI-05-5, 61 NRC 33 (2005)
- 10 C.F.R. Part 61, Subpart C  
the performance objectives are the bottom line for disposal of low-level radioactive wastes; CLI-05-5, 61 NRC 31 (2005)
- 10 C.F.R. 61.40  
whether a low-level radioactive waste is acceptable for land disposal depends upon whether the waste meets the Part 61 criteria for near-surface disposal, or the NRC, after evaluating the specific characteristics of the waste, disposal site, and method of disposal, finds reasonable assurance that radiation exposures will not exceed the limits established in the Part 61 performance objectives for land disposal; CLI-05-5, 61 NRC 29 n.29 (2005)
- 10 C.F.R. 61.41  
the ultimate standards and radiation limits for low-level waste are for protection of the general population from releases of radioactivity; CLI-05-5, 61 NRC 31 (2005)
- 10 C.F.R. 61.42  
the ultimate standards and radiation limits for low-level waste are for protection of individuals from inadvertent intrusion; CLI-05-5, 61 NRC 31 (2005)
- 10 C.F.R. 61.43  
the ultimate standards and radiation limits for low-level waste are for protection of individuals during operations; CLI-05-5, 61 NRC 31 (2005)
- 10 C.F.R. 61.44  
the ultimate standards and radiation limits for low-level waste are for stability of the disposal site after closure; CLI-05-5, 61 NRC 31 (2005)
- 10 C.F.R. 61.55  
whether a low-level radioactive waste is acceptable for land disposal depends upon whether the waste meets the Part 61 criteria for near-surface disposal, or the NRC, after evaluating the specific characteristics of the waste, disposal site, and method of disposal, finds reasonable assurance that



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- radiation exposures will not exceed the limits established in the Part 61 performance objectives for land disposal; CLI-05-5, 61 NRC 29 n.29 (2005)
- 10 C.F.R. 61.55(a)(2)(ii)  
compared to Class A waste, Class B waste requires more rigorous requirements on waste form to ensure stability after disposal; CLI-05-5, 61 NRC 27 (2005)
- 10 C.F.R. 61.55(a)(2)(iii)  
Class C waste not only must meet more rigorous requirements on waste form to ensure stability but also requires additional measures at the disposal facility to protect against inadvertent intrusion; CLI-05-5, 61 NRC 27 (2005)
- greater-than-Class-C waste generally is unacceptable for near-surface disposal, although on a case-by-case basis and with proposed special processing or design, such waste may be approved as suitable for near-surface disposal; CLI-05-5, 61 NRC 27 (2005)
- 10 C.F.R. 61.55(a)(2)(iv)  
greater-than-Class-C low-level waste may be acceptable for disposal in a near-surface disposal facility with special design provisions, or acceptable for land disposal in an intermediate land disposal facility; CLI-05-5, 61 NRC 28, 33 (2005)
- whether a low-level radioactive waste is acceptable for land disposal depends upon whether the waste meets the Part 61 criteria for near-surface disposal, or the NRC, after evaluating the specific characteristics of the waste, disposal site, and method of disposal, finds reasonable assurance that radiation exposures will not exceed the limits established in the Part 61 performance objectives for land disposal; CLI-05-5, 61 NRC 29 n.29 (2005)
- 10 C.F.R. 61.55(a)(3), (4)  
the suitability of wastes for near-surface disposal and their appropriate classification are determined by the amounts of long-lived and short-lived radionuclides contained in the waste, and whether radiation dose levels will drop to acceptable levels over specified periods of time; CLI-05-5, 61 NRC 27 (2005)
- 10 C.F.R. 61.55(a)(6)  
in accepting review of whether depleted uranium is a low-level radioactive waste, the Commission directed the parties to address this regulation; CLI-05-5, 61 NRC 35-36 n.64 (2005)
- 10 C.F.R. 61.58  
greater-than-Class-C low-level waste may be acceptable for disposal in a near-surface disposal facility with special design provisions, or acceptable for land disposal in an intermediate land disposal facility; CLI-05-5, 61 NRC 28, 33 (2005)
- whether a low-level radioactive waste is acceptable for land disposal depends upon whether the waste meets the Part 61 criteria for near-surface disposal, or the NRC, after evaluating the specific characteristics of the waste, disposal site, and method of disposal, finds reasonable assurance that radiation exposures will not exceed the limits established in the Part 61 performance objectives for land disposal; CLI-05-5, 61 NRC 29 n.29 (2005)
- 10 C.F.R. Part 70  
as part of its environmental review of the proposed BLEU Project, Staff reviewed the integrated safety analysis summaries prepared by applicant pursuant to; LBP-05-8, 61 NRC 209 (2005)
- 10 C.F.R. 70.4  
“integrated safety analysis” is defined as a systematic analysis to identify facility and external hazards and their potential for initiating accident sequences, the potential accident sequences, their likelihood and consequences, and the items relied upon for safety; LBP-05-8, 61 NRC 209 (2005)
- 10 C.F.R. 70.23(a)(3)  
NRC must determine whether the applicant’s proposed equipment and facilities are adequate to protect health and minimize danger to life or property; LBP-05-4, 61 NRC 81 (2005)
- 10 C.F.R. 70.23(a)(7)  
an enrichment facility construction and operation license cannot be issued until the Director of the Office of Nuclear Materials Safety and Safeguards concludes, after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values; LBP-05-7, 61 NRC 198 (2005)

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- 10 C.F.R. 70.23(b)  
although courts have applied Federal Rule of Evidence 702 liberally by favoring the admission of any evidence to assist the trier of fact, this regulation governs what factual disputes are material in an NRC proceeding; LBP-05-4, 61 NRC 80 (2005)  
NRC must determine whether the design bases of the principal structures, systems, and components provide reasonable assurance of protection against natural phenomena; LBP-05-4, 61 NRC 81 (2005)
- 10 C.F.R. 70.23a, 70.31(e)  
the mandatory hearing requirement is applicable to both early site permit and uranium enrichment facility proceedings; LBP-05-7, 61 NRC 190 (2005)
- 10 C.F.R. 70.61  
all credible events involving process deviations or other events internal to the facility, and credible external events that could result in facility-induced consequences to workers, the public, or the environment, that could exceed the performance requirements are examined; LBP-05-8, 61 NRC 210 (2005)  
likelihood of “unlikely” and “highly unlikely” events per year are described for purposes of showing compliance with; LBP-05-8, 61 NRC 215 (2005)  
performance requirements for two categories of accident sequence consequences are described; LBP-05-8, 61 NRC 210 (2005)  
the terms “highly unlikely” or “unlikely” are not quantified in; LBP-05-8, 61 NRC 214 (2005)
- 10 C.F.R. 70.61(c)  
the risk associated with intermediate-consequence events is discussed; LBP-05-8, 61 NRC 215 (2005)
- 10 C.F.R. 70.62  
each licensee or applicant is required to prepare an integrated safety analysis; LBP-05-8, 61 NRC 209 (2005)
- 10 C.F.R. 70.64(a)(2)  
facility design must provide for adequate protection against natural phenomena with consideration of the most severe documented historical events for the site; LBP-05-4, 61 NRC 82, 85, 87, 89, 82 (2005)
- 10 C.F.R. 70.64(b)  
NRC’s “defense-in-depth” approach requires a series of engineered barriers to protect against radiation exposures to the public and the environment; LBP-05-13, 61 NRC 411 (2005)
- 10 C.F.R. 70.65  
a summary of the fruits of the integrated safety analysis must be included in the application for a license, license renewal, or license amendment; LBP-05-8, 61 NRC 209 (2005)
- 10 C.F.R. 70.65(b)(9)  
the applicant provides a description of the definitions of unlikely, highly unlikely, and credible as used in the evaluations in the integrated safety analysis; LBP-05-8, 61 NRC 215 (2005)
- 10 C.F.R. 72.3  
greater-than-Class-C waste is a low-level radioactive waste that exceeds the concentration limits of radionuclides established for Class C waste in section 61.55; CLI-05-5, 61 NRC 32 (2005)
- 10 C.F.R. 72.22  
applicant must provide reasonable estimates of its construction and operating costs; CLI-05-1, 61 NRC 167 (2005)
- 10 C.F.R. 72.22(e)  
applicant must provide reasonable assurance that it will be able to cover estimated costs; CLI-04-10, 61 NRC 132, 135 n.24, 142 (2005)  
to show reasonable assurance that it is able to handle the financial burdens of operating an ISFSI, the applicant must demonstrate that it either possesses the necessary funds, or that it 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 estimated construction costs, operating costs over the planned life of the facility, and decommissioning costs; CLI-04-27, 61 NRC 149 (2005)
- 10 C.F.R. 72.22(e)(2)  
licensee is required to identify how it will pay estimated operating costs over the planned life of the independent spent fuel storage installation; CLI-04-27, 61 NRC 148, 155 (2005)  
NRC approves a license subject to conditions preventing the start of operations until the licensee has long-term contracts from potential customers; CLI-04-27, 61 NRC 150 (2005)

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- 10 C.F.R. 72.30(b)  
a specific license condition requiring licensee to review its decommissioning costs annually is unnecessary because the Commission's regulations already require a Part 72 licensee to conduct "periodic" reviews; CLI-04-10, 61 NRC 140 (2005)
- 10 C.F.R. 72.90, 72.94, 72.98  
an applicant must show that if a credible accident were to occur, the consequences would not result in the release of radioactivity that would cause doses in excess of guidelines; LBP-05-12, 61 NRC 323 n.6 (2005)
- 10 C.F.R. 73.1  
design basis threats of theft or diversion of SSNM and radiological sabotage are described; LBP-05-10, 61 NRC 263 (2005)
- 10 C.F.R. 73.1(a)(1)  
licensee is required to protect against the "radiological sabotage" design basis threat defined in; CLI-05-14, 61 NRC 362 (2005)
- 10 C.F.R. 73.1(a)(2)  
for the period of time from receipt until the MOX fuel lead assemblies are irradiated, the design basis threat for theft will apply; CLI-05-14, 61 NRC 362 (2005)
- 10 C.F.R. 73.1(a)(2)(i)(F)  
interpretation of "small group with . . . the ability to operate as two or more teams" in the design basis threat for theft of SSNM; LBP-05-10, 61 NRC 297 (2005)
- 10 C.F.R. 73.2  
a formula quantity is defined as strategic special nuclear material in any combination in a quantity of 5000 grams or more computed by the formula, grams = (grams contained U-235) + 2.5 (grams U-233 + grams plutonium); LBP-05-10, 61 NRC 246 n.1 (2005)  
a tactical response team is the primary response force for each shift which can be identified by a distinctive item of uniform, armed with specified weapons, and whose other duties permit immediate response; LBP-05-10, 61 NRC 287 (2005)  
safeguards information is information not otherwise classified as National Security Information or Restricted Data which specifically identifies a licensee's or applicant's detailed security measures for the physical protection of special nuclear material or for the physical protection and location of certain plant equipment vital to the safety of production or utilization facilities; LBP-05-10, 61 NRC 248 (2005)  
strategic special nuclear material is defined as uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope), uranium-233, or plutonium; LBP-05-10, 61 NRC 246 n.1, 303 (2005)
- 10 C.F.R. 73.2(a)  
physical barrier and material access area are defined; LBP-05-10, 61 NRC 280, 284 (2005)
- 10 C.F.R. 73.5  
an exemption may be granted if it is authorized by law and will not endanger life or property or the common defense and security, and is otherwise in the public interest; CLI-05-14, 61 NRC 363 (2005); LBP-05-10, 61 NRC 262, 303 (2005)  
licensee has met its burden of showing by a preponderance of the evidence that its requested exemptions are appropriate; LBP-05-10, 61 NRC 245, 303 (2005)  
the public interest in nuclear nonproliferation is a significant interest, and although the means of achieving this must be well thought out and safe, the preponderance of the evidence is that this can be assured; LBP-05-10, 61 NRC 303 (2005)
- 10 C.F.R. 73.6(b)  
"weapons-usable" material is plutonium that is not self-protecting in accordance with; LBP-05-10, 61 NRC 262 (2005)
- 10 C.F.R. 73.20  
plutonium contained in mixed oxide fuel assemblies will, during a limited time after delivery and before irradiation, be weapons-usable material and constitutes SSNM in a formula quantity that triggers application of; LBP-05-10, 61 NRC 262 (2005)
- 10 C.F.R. 73.20(a)  
a licensee who possesses or uses formula quantities of SSNM is required not only to demonstrate "reasonable assurance" of safety, but also to have a physical protection system that provides high assurance that activities involving special nuclear material are not inimical to the common defense and

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- security and do not constitute an unreasonable risk to the public health and safety; LBP-05-10, 61 NRC 262, 303 (2005)
- licensee's physical protection system, with the requested exemptions, provides high assurance that activities involving mixed oxide fuel will not be inimical to the common defense and security or constitute an unreasonable risk to the public health and safety; LBP-05-10, 61 NRC 245 (2005)
- the physical protection system for possession of SSNM must be designed to protect against the design basis threats of theft or diversion of SSNM and radiological sabotage; LBP-05-10, 61 NRC 263 (2005)
- 10 C.F.R. 73.21
- a protective order compels parties to protect the information in a manner consistent with the requirements outlined in; CLI-05-2, 61 NRC 6 (2005)
- safeguards information is information not otherwise classified as National Security Information or Restricted Data which specifically identifies a licensee's or applicant's detailed security measures for the physical protection of special nuclear material or for the physical protection and location of certain plant equipment vital to the safety of production or utilization facilities; LBP-05-10, 61 NRC 248 (2005)
- 10 C.F.R. 73.46(b)(3)-(12)
- licensee requests an exemption from tactical response team requirements of; LBP-05-10, 61 NRC 285-86 (2005)
- 10 C.F.R. 73.46(b)(8)
- licensee contends that it meets the requirements substantively, and that the training of its responders is essentially equal to that required for members of a tactical response team; LBP-05-10, 61 NRC 289 (2005)
- 10 C.F.R. 73.46(b)(12)
- licensee contends that, although it does not test its responders' physical fitness every 3 months as required, its annual fitness qualification procedures are equivalent to the requirements of; LBP-05-10, 61 NRC 290 (2005)
- 10 C.F.R. 73.46(c)(1)
- Board finds that granting the requested exemptions from the requirements regarding physical barriers will not endanger life or property or be inimical to the common defense and security; LBP-05-10, 61 NRC 284 (2005)
- licensee requests an exemption from physical barrier requirements; LBP-05-10, 61 NRC 279, 280, 283 (2005)
- 10 C.F.R. 73.46(d)(9)
- a licensing board requires, as a condition to granting the requested exemption, that licensee modify its security procedures; LBP-05-10, 61 NRC 279 (2005)
- licensee bases its exemption request on its belief that, because MOX fuel assemblies are relatively unattractive targets, the additional measures taken to protect against theft and diversion make strict adherence to this regulation unnecessary; LBP-05-10, 61 NRC 276 (2005)
- licensee fulfills some of the requirements of this regulation as part of its compliance with section 73.55(d); LBP-05-10, 61 NRC 276 (2005)
- 10 C.F.R. 73.46(h)(3)
- the requirement for a tactical response team is described; LBP-05-10, 61 NRC 285-86, 292 (2005)
- 10 C.F.R. 73.55
- vital areas at nuclear power plants require only two barriers; LBP-05-10, 61 NRC 282 (2005)
- 10 C.F.R. 73.55(b)(4)(i), (ii)
- licensee's security training and qualification plan implements the requirements for nuclear power reactors; LBP-05-10, 61 NRC 289 (2005)
- 10 C.F.R. 73.55(d)
- prior to entry into a protected area, there must be searches using various methods, for firearms, explosives, and incendiary devices; LBP-05-10, 61 NRC 276 (2005)
- 10 C.F.R. 73.56, 73.57
- all individuals permitted unescorted access, including both contractors and licensee employees, must undergo background and criminal history checks; LBP-05-10, 61 NRC 274 (2005)

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- 10 C.F.R. 74.19  
NRC is considering escalated enforcement action for an apparent violation of material control and accounting of special nuclear material recordkeeping related to two spent fuel rod pieces missing from their documented location in spent fuel pool; DD-05-1, 61 NRC 233 (2005)
- 10 C.F.R. Part 100  
with respect to AEA safety matters in the contested and uncontested early site permit proceedings, the notices of hearing label as safety issues what are essentially the elements of safety issues; LBP-05-7, 61 NRC 193 (2005)
- 10 C.F.R. 110.10  
an applicant must show that if a credible accident were to occur, the consequences would not result in the release of radioactivity that would cause doses in excess of guidelines; LBP-05-12, 61 NRC 323 n.6 (2005)
- 10 C.F.R. Part 961  
status of DOE's Standard Contract for Disposal of Spent Nuclear Fuel and/or High Level Radioactive Waste is discussed; CLI-05-12, 61 NRC 348 (2005)
- 10 C.F.R. 961.11  
according to DOE's Standard Contract, when DOE is ready to pick up fuel, it will send containers to the reactor site into which the operators will transfer the spent fuel; CLI-05-12, 61 NRC 348 (2005)
- 10 C.F.R. 961.11, art. I.7  
DOE's Standard Contract contemplates that the spent fuel may have already been moved away from the originating reactor; CLI-05-12, 61 NRC 351 n.24 (2005)
- 10 C.F.R. 961.11, art. IV.A.2(a)  
under DOE's Standard Contract, operators are responsible for packing the spent fuel containers; CLI-05-12, 61 NRC 351 n.23 (2005)
- 10 C.F.R. 961.11, art. IV.B.2  
DOE's Standard Contract provides that DOE will send containers, suitable for use at the particular nuclear power plant; CLI-05-12, 61 NRC 351 (2005)
- 40 C.F.R. Part 1500  
Council on Environmental Quality regulations are not binding on the NRC when the agency has not expressly adopted them, but they are entitled to considerable deference; LBP-05-13, 61 NRC 403 (2005)
- 40 C.F.R. 1501.7  
the scope of the NEPA analysis requires that the project, including its definite follow-ons, be fairly defined; LBP-05-5, 61 NRC 119 (2005)
- 40 C.F.R. 1502.16, 1508.8  
an agency environmental impact statement must address both direct and indirect effects of an action; LBP-05-13, 61 NRC 403 (2005)
- 40 C.F.R. 1508.7  
NEPA requires, under the cumulative-impacts rubric, the taking into account of future reasonably foreseeable results of current federal licensing actions, and imposes a rule against incrementalism, that is, against analyzing a succession of currently contemplated federal licensing actions in series, as though they were separate, unrelated activities; LBP-05-5, 61 NRC 119 (2005)
- 40 C.F.R. 1508.8  
direct effects are those caused by the federal action, and occurring at the same time and place as that action, while indirect effects are caused by the action at a later time or more distant place, yet are still reasonably foreseeable; LBP-05-13, 61 NRC 404 (2005)
- 40 C.F.R. 1508.25  
the scope of the NEPA analysis requires that the project, including its definite follow-ons, be fairly defined; LBP-05-5, 61 NRC 119 (2005)

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- Administrative Procedure Act, 5 U.S.C. § 551(6), (9)  
an order may be developed in a licensing process, i.e., an agency process respecting the modification of a license; CLI-05-6, 61 NRC 31 (2005)
- Administrative Procedure Act, 5 U.S.C. § 551(7)  
adjudication includes any agency process for the formulation of an order; CLI-05-6, 61 NRC 31 (2005)
- Administrative Procedure Act, 5 U.S.C. § 553  
if the Commission's security order is a rule, then notice-and-comment procedures apply to the proceeding, but if the order is a form of adjudication, those procedures are not required; CLI-05-6, 61 NRC 39 (2005)
- Administrative Procedure Act, 9, 5 U.S.C. 558  
allowing an order to become immediately effective on the ground of willfulness is consistent with; LBP-05-2, 61 NRC 62 (2005)
- Atomic Energy Act, 42 U.S.C. § 2014e(2)  
depleted uranium is not high-level waste, spent nuclear fuel, 11e(2) byproduct material, or transuranic waste; CLI-05-5, 61 NRC 34 (2005)
- Atomic Energy Act, 103b, 42 U.S.C. § 2133(b)  
the Commission is authorized to accord protection from radiological injury to both health and property interests; CLI-05-11, 61 NRC 314 (2005)
- Atomic Energy Act, 103(b)(3), 42 U.S.C. § 2133(b)(3)  
Congress's purpose in enacting this section was to protect the property right, the commercial right, which a licensee as a developer of a new procedure, new idea, should properly have; CLI-05-1, 61 NRC 180 n.120 (2005)
- Atomic Energy Act, 147, 42 U.S.C. § 2167  
if the Commission were constrained to employ only rulemaking procedures to impose prospective requirements, then this provision, requiring the Commission to prescribe regulations or issue orders as necessary to prohibit the unauthorized disclosure of safeguards information, would be a dead letter; CLI-05-6, 61 NRC 30 (2005)
- Atomic Energy Act, 161b, 42 U.S.C. § 2201(b)  
if the Commission were constrained to employ only rulemaking procedures to impose prospective requirements, then this provision, authorizing the Commission to issue orders to establish safety and security "standards," would be a dead letter; CLI-05-6, 61 NRC 30 (2005)  
the Commission is authorized to accord protection from radiological injury to both health and property interests; CLI-05-11, 61 NRC 314 (2005)
- Atomic Energy Act, 182(a), 42 U.S.C. § 2232(a)  
NRC is authorized to impose appropriate financial qualifications standards on licensees; CLI-04-27, 61 NRC 149 (2005)
- Atomic Energy Act, 189, 42 U.S.C. § 2239  
to the extent it is not inconsistent with hearing requirements, the fair and reasonable settlement of contested initial licensing proceedings is encouraged; CLI-05-1, 61 NRC 168 (2005)
- Atomic Energy Act, 189a, 42 U.S.C. § 2239(a)  
if the Commission's security order is a rule, then notice-and-comment procedures apply to the proceeding, but if the order is a form of adjudication, those procedures are not required; CLI-05-6, 61 NRC 39 (2005)

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- license termination plans, unlike license termination, are implemented by license amendment, an agency action that triggers a hearing opportunity by law; CLI-05-15, 61 NRC 380 (2005)
- the Commission must grant a hearing upon the request of any person whose interest may be affected by the proceeding; CLI-05-11, 61 NRC 311 (2005)
- Atomic Energy Act, 189a(1)(A), 42 U.S.C. § 2239(a)(1)(A)
- the Commission shall hold a hearing after 30 days' notice and publication once in the Federal Register, on each application for a construction permit for a production or utilization facility; LBP-05-7, 61 NRC 190 (2005)
- Executive Order 12898
- although agencies are directed to take into account environmental justice issues in exercising their statutory duties, no new substantive right is created; CLI-05-4, 61 NRC 13 (2005)
- Freedom of Information Act, 5 U.S.C. § 552(a)(4)(B)
- the D.C. Circuit decisions carry particular weight regarding the FOIA Exemption 4 issue because it oversees the United States District Court for the District of Columbia, which is the court of universal venue for FOIA cases; CLI-05-1, 61 NRC 172 n.65 (2005)
- Freedom of Information Act, 5 U.S.C. § 552(b)(4)
- it is not the Commission's intent to permit a greater degree of withholding of documents from public disclosure under § 2.790 than would be permitted under the Freedom of Information Act; CLI-05-1, 61 NRC 163 (2005)
- Low-Level Radioactive Waste Policy Act, 2(9), 42 U.S.C. § 2021b(9)
- low-level radioactive waste is radioactive material that is not high-level radioactive waste, spent nuclear fuel, or byproduct material; CLI-05-5, 61 NRC 30 (2005)
- Miss. Code Ann. § 27-35-309
- an environmental report describes how the state taxes the facility directly, allocates a portion to the host county, and then divides most of the remaining funds among the other counties in proportion to the energy used by retail customers therein; CLI-05-4, 61 NRC 17 (2005)
- Miss. Code Ann. § 27-35-309(3)
- a nuclear facility owned by a public utility rendering electrical service within the state, and which is not owned or operated by an instrumentality of the federal government, is exempt from local taxation; CLI-05-4, 61 NRC 14 n.12 (2005)
- National Environmental Policy Act, 42 U.S.C. §§ 4321, 4331-35
- petitioner's challenge to the authorization of the BLEU Project is based entirely on the proposition that the NRC Staff failed to comply with the requirements of; LBP-05-8, 61 NRC 206 (2005)
- National Environmental Policy Act, 102(2)(C), 42 U.S.C. § 4332(2)(C)
- a procedural requirement is imposed on an agency's decisionmaking process by mandating that an agency consider the environmental impacts of a proposed action and inform the public that it has taken those impacts into account in making its decision; LBP-05-8, 61 NRC 206-07 (2005)
- National Environmental Policy Act, 102(2)(E)
- an environmental assessment must include a brief discussion of alternatives as required by; LBP-05-8, 61 NRC 207 (2005)
- Nuclear Waste Policy Act of 1982, 42 U.S.C. §§ 10101(12), 10101(23)
- depleted uranium is not high-level waste, spent nuclear fuel, 11e(2) byproduct material, or transuranic waste; CLI-05-5, 61 NRC 34 (2005)
- Nuclear Waste Policy Act of 1982, 42 U.S.C. § 10102
- transuranic waste is not low-level radioactive waste; CLI-05-5, 61 NRC 30 (2005)
- Nuclear Waste Policy Act, 42 U.S.C. § 10175(c)
- shipping spent-fuel-laden canisters fewer, rather than more, times across the country would make sense and thus would better comport with NEPA; LBP-05-5, 61 NRC 122-23 (2005)
- Nuclear Waste Policy Act, 42 U.S.C. § 10222(a)(5)(b)
- DOE was directed to start disposing of spent fuel no later than January 31, 1998; CLI-05-12, 61 NRC 351 n.25 (2005)
- USEC Privatization Act, § 3102, 42 U.S.C. § 2297h
- low-level radioactive waste has the meaning set forth in section 2(9) of the Low-Level Radioactive Waste Policy Act; CLI-05-5, 61 NRC 30 (2005)

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USEC Privatization Act, § 3113

an approach by applicant to transfer to DOE for disposal by DOE of applicant's depleted tails would constitute a plausible strategy for disposal of the depleted tails if the tails could be considered low-level radioactive waste; CLI-05-5, 61 NRC 25, 26 (2005)

USEC Privatization Act, § 3113(a), 42 U.S.C. § 2297h-11

if requested, DOE is required to accept low-level radioactive waste for disposal, including depleted uranium if it were ultimately determined to be low-level radioactive waste, generated by any person licensed by NRC to operate a uranium enrichment facility; CLI-05-5, 61 NRC 25, 28 (2005)



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- 23 Am. Jur. 2d *Depositions & Discovery* § 180 (1983 & Supp. 2000)  
the determination of who is a “managing agent” of a corporate party whose discovery deposition may be used by an adversary is made on a case-by-case, pragmatic basis; LBP-05-10, 61 NRC 252 (2005)
- Fed. R. Civ. P. 32(a)(2)  
a trial court may not exclude a deposition merely because the party is available to testify in person; LBP-05-10, 61 NRC 252 (2005)
- Fed. R. Civ. P. 56  
summary disposition motions under 10 C.F.R. § 2.749 are analogous to summary judgment motions and should be evaluated under the same standards; LBP-05-4, 61 NRC 79 (2005)  
summary judgment is not appropriate where it would require a determination of the credibility of witnesses; LBP-05-4, 61 NRC 80 (2005)
- Fed. R. Evid. 702  
a witness qualifies as an expert by knowledge, skill, experience, training, or education; LBP-05-4, 61 NRC 80 (2005)  
an opinion of an expert is admissible only if the opinion would assist the trier of facts in understanding the evidence or to determine a fact in issue and the opinion is based upon sufficient facts or data to be the product of reliable principles and methods that the witness applied to the facts of the case; LBP-05-4, 61 NRC 80, 99 (2005)  
where the opinions of two experts may appear to be in conflict with each other, this rule may also serve as guidance in determining whether the experts’ opinions preclude summary disposition of the contention; LBP-05-4, 61 NRC 80 (2005)
- Hearings on S. 3323 and H.R. 8862 To Amend the Atomic Energy Act of 1946 Before the Joint Comm. on Atomic Energy*, 83d Cong. 925 (1954) (remarks of Congressman Cole, the committee’s chairman)  
Congress’s purpose in enacting AEA § 103(b)(3) was to protect the property right, the commercial right, which a licensee as a developer of a new procedure, new idea, should properly have; CLI-05-1, 61 NRC 180 (2005)
- Norman J. Singer, *Sutherland on Statutes & Construction* § 21.12 (6th ed. 2000)  
although use of the word “or” usually indicates alternatives and requires that those alternatives be treated separately, it is important not to read the word “or” too strictly, where to do so would render the language of the statute dubious; LBP-05-10, 61 NRC 299 (2005)
- United States Department of Justice, *Freedom of Information Act Guide & Privacy Act Overview* at 325 n.311 (May 2004)  
other than in a monopoly situation, anything that undermines a supplier’s relationship with its customers must necessarily aid its competitors; CLI-05-1, 61 NRC 172 (2005)
- Webster’s Third New International Dictionary* at 376 (1981)  
“characterization” is defined as “the act, process, or result of characterizing,” while the word “characterize” means “to describe the essential character or quality of”; CLI-05-15, 61 NRC 373 (2005)
- Webster’s Third New International Dictionary* at 1729 (1981)  
“plan” has meanings ranging from “a method of achieving something” to a “detailed and systematic formulation of a large-scale campaign or program of action”; CLI-05-15, 61 NRC 373-74 (2005)
- Webster’s Third New International Dictionary* at 1920 (1981)  
“remediation” is defined as the “act or process of remedying”; CLI-05-15, 61 NRC 373 (2005)

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*Webster's Third New International Dictionary of the English Language, Unabridged* (1976)

the licensing board considers the word "team" in its ordinary meaning of a "number" or "group" of persons, such that two would be the minimum number of persons who could make up a team; LBP-05-10, 61 NRC 301 n.263 (2005)

Charles Alan Wright et al., *Federal Practice & Procedure* §2145, at 171 (1994 & Supp. 2003)

Federal Rule of Civil Procedure 32(a)(2) permits a party to introduce, as part of his substantive proof, the deposition of his adversary, and it is quite immaterial that the adversary is available to testify at the trial or has testified there; LBP-05-10, 61 NRC 252 (2005)

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### ACCIDENTS

a one-in-a-million per year likelihood of an F-16 crashing into aboveground concrete and steel casks at a spent fuel storage facility and breaching its internal canister is not a credible threat; LBP-05-12, 61 NRC 319 (2005)

### ADJUDICATORY BOARDS

boards generally may not exercise supervisory authority over the Staff; CLI-05-2, 61 NRC 1 (2005)

### ADJUDICATORY HEARINGS

license termination plans, unlike license termination, are implemented by license amendment, an agency action that triggers a hearing opportunity by law; CLI-05-15, 61 NRC 365 (2005)

### ADJUDICATORY PROCEEDINGS

a proceeding on a request for information is not required to be as elaborate as a licensing or other formal proceeding; CLI-05-1, 61 NRC 160 (2005)

an issue raised for the first time during a hearing on a reconsideration motion is not litigable; LBP-05-12, 61 NRC 319 (2005)

NRC has discretion under the Administrative Procedure Act and the Atomic Energy Act to impose binding, prospectively applicable legal requirements through; CLI-05-6, 61 NRC 37 (2005)

### ADMINISTRATIVE PROCEDURE ACT

issuance of an order modifying individual licenses fits well within the definition of "adjudication" under; CLI-05-6, 61 NRC 37 (2005)

### AIRCRAFT CRASHES

a one-in-a-million per year likelihood of an F-16 crashing into aboveground concrete and steel casks at a spent fuel storage facility and breaching its internal canister is not a credible threat; LBP-05-12, 61 NRC 319 (2005)

an applicant must show that if a credible accident were to occur, the consequences would not result in the release of radioactivity that would cause doses in excess of Part 100 guidelines; LBP-05-12, 61 NRC 319 (2005)

an issue stemming from the probability/consequences risk analysis dichotomy is resolved; LBP-05-12, 61 NRC 319 (2005)

impact geometry for F-16 crashes involving a spent fuel storage facility is discussed; LBP-05-12, 61 NRC 319 (2005)

reanalysis of crash data for purposes of a sensitivity analysis does not mean data should be excluded as unrepresentative of the overall database; LBP-05-12, 61 NRC 319 (2005)

### APPEALS, INTERLOCUTORY

in reviewing an "interlocutory appeal as of right" from an applicant or licensee challenging the admissibility of contentions, the Commission considers whether the request for hearing and/or petition to intervene should have been wholly denied; CLI-05-15, 61 NRC 365 (2005)

it is difficult to find serious, immediate, and irreparable harm where there is no evidence that the board order has strayed from the Commission's regulations regarding the protection of safeguards information; CLI-05-2, 61 NRC 1 (2005)

serious, immediate, and irreparable harm is one of the grounds for grant of discretionary review; CLI-05-2, 61 NRC 1 (2005)

to determine whether a request for hearing and/or petition to intervene should have been wholly denied, the Commission examines whether the petitioner has standing to intervene and whether at least one of

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the admitted contentions satisfies the requirements set forth in 10 C.F.R. 2.309(f)(1); CLI-05-15, 61 NRC 365 (2005)

### APPELLATE REVIEW

applicant asserts administrative efficiency to justify initially raising a supplemental request with the Commission rather than with the licensing board; CLI-05-1, 61 NRC 160 (2005)

Commission review is warranted when the petitioner demonstrates that the Board made a clear error in a finding of fact, an error of law, a prejudicial procedural error, or where the Board decision raises a substantial and important question of law, policy or discretion; CLI-05-12, 61 NRC 345 (2005)

it is difficult to find serious, immediate, and irreparable harm where there is no evidence that the Board order has strayed from the Commission's regulations regarding the protection of safeguards information; CLI-05-2, 61 NRC 1 (2005)

review is particularly appropriate where a board's ruling may have made a clear error as to a material fact, where the ruling turns on a legal conclusion that is without precedent or conflicts with existing precedent, or where the ruling raises an important policy issue that the Commission itself should consider; CLI-04-10, 61 NRC 131 (2005)

serious, immediate, and irreparable harm is one of the grounds for grant of discretionary interlocutory review; CLI-05-2, 61 NRC 1 (2005)

the Commission is free to affirm a board decision on any ground finding support in the record, whether previously relied upon or not; CLI-05-1, 61 NRC 160 (2005)

the Commission may grant review of initial board decisions, or partial initial decisions, based on any consideration it deems to be in the public interest; CLI-04-10, 61 NRC 131 (2005)

### APPLICANTS

when reviewing a license application filed by a private applicant, as opposed to a federally sponsored project, an agency may give substantial weight to the stated preferences of the applicant with regard to issues such as site selection and facility design; LBP-05-13, 61 NRC 385 (2005)

### ATOMIC ENERGY ACT

NRC is authorized to impose appropriate financial qualifications standards on licensees; CLI-04-27, 61 NRC 145 (2005)

### BOARDS

See Adjudicatory Boards; Licensing Boards

### CERTIFIED QUESTIONS

boards and presiding officers are encouraged to certify novel legal or policy questions early in a proceeding; CLI-05-14, 61 NRC 359 (2005)

in granting review of certified questions, the Commission follows its customary practice of accepting Board-certified questions; CLI-05-9, 61 NRC 235 (2005)

serious, immediate, and irreparable harm is one of the grounds for grant of discretionary review of; CLI-05-2, 61 NRC 1 (2005)

the Chief Administrative Judge certifies common and novel questions related to the proper conduct of mandatory hearings to the Commission for its consideration and resolution; LBP-05-7, 61 NRC 188 (2005)

### CIVIL PENALTIES

a licensee is responsible when its employee fails to provide information to the NRC that is complete and accurate in all respects; LBP-05-11, 61 NRC 306 (2005)

### COLLATERAL ESTOPPEL

losing parties are not free to relitigate already-decided questions in subsequent cases involving the same parties; CLI-05-1, 61 NRC 160 (2005)

this doctrine does not call for an inquiry into the correctness of the prior decision; CLI-05-1, 61 NRC 160 (2005)

### COMPETITIVE INJURY

a company can demonstrate substantial harm to its competitive position without showing actual competitive harm; CLI-05-1, 61 NRC 160 (2005)

applicant's claim of harm depends on a showing that it has competitors for its services; CLI-05-1, 61 NRC 160 (2005)

either competitors or noncompetitors such as customers and suppliers can be the source of; CLI-05-1, 61 NRC 160 (2005)

## SUBJECT INDEX

- even out-of-date financial information could arguably give competitors, vendors, suppliers, and subcontractors useful information that they would use to applicant's disadvantage in future negotiations; CLI-05-1, 61 NRC 160 (2005)
- in a FOIA Exemption 4 context, disclosure of government contract prices would harm the submitter of that information by permitting its commercial customers to bargain down its prices more effectively; CLI-05-1, 61 NRC 160 (2005)
- other than in a monopoly situation, anything that undermines a supplier's relationship with its customers must necessarily aid its competitors; CLI-05-1, 61 NRC 160 (2005)
- the third prong of FOIA Exemption 4 requires a showing of the existence and the likelihood of competition; CLI-05-1, 61 NRC 160 (2005)
- CONFIDENTIAL INFORMATION**
- competitive injury must be directly caused by a competitor's use of the information; CLI-05-1, 61 NRC 160 (2005)
- five factors are considered in determining whether to withhold privileged or confidential commercial or financial information from the public; CLI-05-1, 61 NRC 160 (2005)
- the agency will withhold from the public, commercial or financial information obtained from a person and that is privileged or confidential; CLI-05-1, 61 NRC 160 (2005)
- under FOIA Exemption 4, this is defined as information whose disclosure is likely to impair the government's future ability to obtain necessary information, or impair other government interests such as compliance, program efficiency and effectiveness, and the fulfillment of an agency's statutory mandate, or cause substantial harm to the competitive position of the person from whom the information was obtained; CLI-05-1, 61 NRC 160 (2005)
- CONFIDENTIALITY**
- applicant's own actions and practice in publishing information on its Web site or newsletters renders redaction inappropriate for that information; CLI-05-1, 61 NRC 160 (2005)
- the importance of honoring the settling parties' expectations is particularly strong where both parties to the settlement oppose disclosure of its terms on grounds of potential financial harm; CLI-05-1, 61 NRC 160 (2005)
- CONSIDERATION OF ALTERNATIVES**
- an alternative that requires nuclear waste to be shipped cross-country from the originating reactor to a temporary storage facility, back cross-country to the originating reactor for "recontainerization," and back again cross-country to a permanent repository seems far less attractive than an alternative that requires only shipment from the originating reactor cross-country to a temporary storage facility, then to a nearby permanent repository all in the same container; LBP-05-5, 61 NRC 108 (2005)
- CONSTRUCTION OF MEANING**
- if, in implementing a security order, licensees perceive a conflict between the baseline requirements of NRC regulations and the supplemental requirements of the order, the more stringent requirement applies; CLI-05-6, 61 NRC 37 (2005)
- judicial interpretations of a federal rule can serve as guidance for interpreting a similar or analogous NRC discovery rule; LBP-05-10, 61 NRC 241 (2005)
- the plainness or ambiguity of language is determined by reference to the language itself, the specific context in which that language is used, and the broader context of the statute or regulation as a whole; LBP-05-10, 61 NRC 241 (2005)
- CONSTRUCTION OF TERMS**
- canons of construction ordinarily suggest that terms connected by "or," be given separate meanings, unless the context dictates otherwise; LBP-05-10, 61 NRC 241 (2005)
- CONTENTIONS**
- a contention that focuses on the Staff's purported failure to provide an explanation relative to certain calculations is a contention of omission which, upon cure, becomes moot; LBP-05-13, 61 NRC 385 (2005)
- CONTENTIONS, ADMISSIBILITY**
- a licensing board cannot admit to a proceeding a contention formulated as a bare assertion without factual underpinning; LBP-05-5, 61 NRC 108 (2005)
- a procedural contention that challenges NRC's spent fuel security orders as an unlawful rulemaking conducted without notice-and-comment procedures is litigable; CLI-05-6, 61 NRC 37 (2005)

## SUBJECT INDEX

- after the record has been closed, the standards governing admissibility of issues and those governing summary disposition can and should be conflated; LBP-05-5, 61 NRC 108 (2005)
- decision is due within 45 days after the filing of answers and replies; CLI-05-4, 61 NRC 10 (2005)
- if any portion of petitioners' contention either fails to raise a material legal or factual dispute and is outside the scope of the hearing, that portion is rightly found inadmissible; CLI-05-4, 61 NRC 10 (2005)
- in the early stages of litigation, boards frequently must consider numerous contentions and are expected to act promptly, necessitating reasonable brevity in; CLI-05-4, 61 NRC 10 (2005)
- proponents of a contention addressing deficiencies in a license termination plan must demonstrate that it is within the scope of the proceeding, has an adequate basis supported by facts or opinion, and raises a genuine dispute regarding an issue material to the findings the NRC must make prior to approval of the LTP; CLI-05-15, 61 NRC 365 (2005)
- the criteria are strict by design and should be rigorously followed by NRC adjudicatory bodies; CLI-05-15, 61 NRC 365 (2005)
- COUNCIL ON ENVIRONMENTAL QUALITY**
- regulations promulgated by the CEQ to provide agency guidance on NEPA compliance are not binding on the NRC when the agency has not expressly adopted them, but they are entitled to considerable deference; LBP-05-13, 61 NRC 385 (2005)
- CREDIBILITY**
- summary judgment is not appropriate where it would require a determination of the credibility of witnesses; LBP-05-4, 61 NRC 71 (2005)
- DECOMMISSIONING FUNDING**
- a specific license condition requiring licensee to review its decommissioning costs annually is unnecessary because the Commission's regulations already require a Part 72 licensee to conduct "periodic" reviews; CLI-04-10, 61 NRC 131 (2005)
- an applicant must provide reasonable assurance that it will be able to cover estimated costs; CLI-04-10, 61 NRC 131 (2005)
- any failure by licensee to make a payment to the decommissioning fund when due that has not been cured by payment in full within 90 days of the due date shall result in the rescission of the exemption from sections 30.32(h) and 30.35(a); LBP-05-14, 61 NRC 448 (2005)
- details of applicant's cost-passthrough arrangements have been withheld from the public because their release would compromise applicant's legitimate competitive concerns; CLI-05-8, 61 NRC 129 (2005)
- DECOMMISSIONING PLANS**
- delay in hearing on plan for site containing depleted uranium munitions is called to the Commission's attention; LBP-05-9, 61 NRC 218 (2005)
- DEFENSE-IN-DEPTH POLICY**
- because there is no perfectly engineered system, the NRC has adopted this approach, which requires a series of engineered barriers to protect against radiation exposures to the public and the environment; LBP-05-13, 61 NRC 385 (2005)
- DEFINITIONS**
- under FOIA Exemption 4, the current legal definition of "confidential" is information whose disclosure is likely to impair the government's future ability to obtain necessary information, or impair other government interests such as compliance, program efficiency and effectiveness, and the fulfillment of an agency's statutory mandate, or cause substantial harm to the competitive position of the person from whom the information was obtained; CLI-05-1, 61 NRC 160 (2005)
- DELAY OF PROCEEDING**
- the presiding officer calls the Commission's attention to the extended history of a materials license amendment proceeding, and the current lack of assurance that it will move forward in the near term; LBP-05-9, 61 NRC 218 (2005)
- DEPARTMENT OF ENERGY**
- status of Standard Contract for Disposal of Spent Nuclear Fuel and/or High Level Radioactive Waste is discussed; CLI-05-12, 61 NRC 345 (2005)

## SUBJECT INDEX

### DEPLETED URANIUM

regardless of which form the uranium may take at the time of disposal or its radionuclide concentration, it belongs most appropriately under the general low-level radioactive waste category; CLI-05-5, 61 NRC 22 (2005)

the Department of Energy must accept for disposal depleted uranium from any NRC uranium enrichment licensee, if depleted uranium is ultimately determined to be low-level radioactive waste; CLI-05-5, 61 NRC 22 (2005)

### DEPOSITIONS

determination of who is a "managing agent" of a corporate party, whose discovery deposition may be used by an adversary, is made on a case-by-case, pragmatic basis; LBP-05-10, 61 NRC 241 (2005)

the Technical Specialist responsible for oversight of security measures at a nuclear plant is the "managing agent" for the purpose of giving testimony regarding security matters; LBP-05-10, 61 NRC 241 (2005)

### DESIGN BASIS THREAT

legal questions about the interpretation of regulatory requirements that arise in the course of considering the admission of contentions or later in the adjudication should be referred to the Commission for appropriate guidance; CLI-05-14, 61 NRC 359 (2005)

### DISCLOSURE

requests have been refused where the information's release will harm the future negotiating position of a party; CLI-05-1, 61 NRC 160 (2005)

### DISCOVERY

judicial interpretations of a federal rule can serve as guidance for interpreting a similar or analogous NRC rule; LBP-05-10, 61 NRC 241 (2005)

### DRAFT ENVIRONMENTAL IMPACT STATEMENT

although the DEIS may rely in part on the environmental report, the Staff is required to independently evaluate and be responsible for the reliability of all information used in; LBP-05-13, 61 NRC 385 (2005)

### EARLY SITE PERMIT PROCEEDING

the Chief Administrative Judge certifies common and novel questions related to the proper conduct of mandatory hearings to the Commission for its consideration and resolution; LBP-05-7, 61 NRC 188 (2005)

### EARTHQUAKES

adequacy of the analyses of the likelihood of a significant earthquake in the East Tennessee Seismic Zone and the fuel facility's response to it are discussed; LBP-05-4, 61 NRC 71 (2005)

recurrence intervals for Charleston-type events are discussed; LBP-05-4, 61 NRC 71 (2005)

### ENFORCEMENT ACTIONS

when an immediately effective enforcement order is challenged, Staff must demonstrate that adequate evidence supports a conclusion that the licensee violated a Commission requirement and that the violation was willful or poses a risk to the public health, safety, or interest that requires immediate action; LBP-05-2, 61 NRC 53 (2005)

### ENFORCEMENT ORDERS

a licensee may challenge the immediate effectiveness of an order by moving to set it aside on the ground that the order is not based on adequate evidence but on mere suspicion, unfounded allegations, or error; LBP-05-2, 61 NRC 53 (2005)

the Commission exercises its supervisory role over licensing and enforcement proceedings by lifting the immediate effectiveness of Staff's license suspension order when public interest and other issues have been raised; CLI-05-7, 61 NRC 69 (2005)

the term "willful" in 10 C.F.R. 2.202 does not contain a scienter requirement such that the Staff, to sustain an immediately effective order, must show some evidence of wrongful purpose; LBP-05-2, 61 NRC 53 (2005)

### ENFORCEMENT PROCEEDINGS

in a proceeding involving a licensee's challenge to a suspension order, the licensing board is obliged to dismiss the proceeding as moot where the Staff has unconditionally withdrawn the challenged order and given assurance that another order of this type is not fairly capable of repetition; LBP-05-6, 61 NRC 185 (2005)

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### ENVIRONMENTAL ANALYSIS

agencies are given broad discretion in determining how thoroughly to analyze a particular subject and may decline to examine issues the agency in good faith considers "remote and speculative" or "inconsequentially small"; LBP-05-13, 61 NRC 385 (2005)

in seeking to address the need for its proposed enrichment facility, an applicant is not required to present a business plan, to make its "business case," or to demonstrate the profitability of its proposed facility, nor is it under any obligation to provide a detailed market analysis; LBP-05-13, 61 NRC 385 (2005)

NEPA requires that agencies take a "hard look" at the environmental impacts of a proposed action, as well as reasonable alternatives to that action; LBP-05-13, 61 NRC 385 (2005)

the Board's inquiry into the need for a facility should focus upon the projected demand (based on current operating and anticipated new reactors) and the expected supply based upon the actual commitments or statements of the parties involved in supply production; LBP-05-13, 61 NRC 385 (2005)

### ENVIRONMENTAL IMPACT STATEMENT

although petitioners might prefer different language or emphasis, "editing" NEPA documents is not a function of the Commission's hearing process; CLI-05-4, 61 NRC 10 (2005)

although Staff must address the monitoring of effluent contaminants, compliance with state requirements is, in the first instance, a matter for the state; LBP-05-13, 61 NRC 385 (2005)

even if an EIS prepared by the Staff is found inadequate in certain respects, the ultimate NEPA judgments regarding a facility can be made on the basis of the entire record before a presiding officer, such that the EIS can be deemed to be amended pro tanto; LBP-05-13, 61 NRC 385 (2005)

it is within the agency's discretion to rely on an EIS, draft or otherwise, prepared by another federal agency if such reliance will aid in the presentation of issues, eliminate repetition, or reduce the length of an EIS; LBP-05-13, 61 NRC 385 (2005)

remote or speculative effects a proposed action need not be discussed; LBP-05-13, 61 NRC 385 (2005)

the NEPA-required "hard look" at the environmental consequences of a proposed project must be reflected in a reasoned discussion of the relevant issues in; LBP-05-13, 61 NRC 385 (2005)

under CEQ regulations, an agency must address both direct and indirect effects of an action; LBP-05-13, 61 NRC 385 (2005)

### ENVIRONMENTAL ISSUES

although regulations suggest that an evidentiary hearing regarding environmental issues should not go forward until the final EIS has been issued, a hearing on admitted environmental contentions was conducted following issuance of the Staff's draft EIS; LBP-05-13, 61 NRC 385 (2005)

### ENVIRONMENTAL JUSTICE

although petitioners might prefer different language or emphasis in the environmental report, "editing" NEPA documents is not a function of the Commission's hearing process; CLI-05-4, 61 NRC 10 (2005)

where the information contained in the environmental report was sufficiently detailed in its descriptions of the minority and low-income populations surrounding the plant, the environmental report was sufficiently accurate to inform the public as to the socioeconomic makeup of the affected community; CLI-05-4, 61 NRC 10 (2005)

without evidence to the contrary, poverty-driven inadequacies in emergency response are assumed to affect all county residents equally; CLI-05-4, 61 NRC 10 (2005)

### ENVIRONMENTAL REPORT

although petitioners might prefer different language or emphasis, "editing" NEPA documents is not a function of the Commission's hearing process; CLI-05-4, 61 NRC 10 (2005)

content of an ER for a Part 70 license for a uranium enrichment facility is described; LBP-05-13, 61 NRC 385 (2005)

where the information contained in the environmental report was sufficiently detailed in its descriptions of the minority and low-income populations surrounding the plant, the ER was sufficiently accurate to inform the public as to the socioeconomic makeup of the affected community; CLI-05-4, 61 NRC 10 (2005)

### EVIDENCE

a deposition may not be excluded merely because a party is available to testify in person; LBP-05-10, 61 NRC 241 (2005)



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in limiting the sites at which parties may examine security-related documents, boards may also take into account the practical concerns and delays that may stem from such limitations in individual cases; CLI-05-2, 61 NRC 1 (2005)

reanalysis of crash data for purposes of a sensitivity analysis does not mean data should be excluded as unrepresentative of the overall database; LBP-05-12, 61 NRC 319 (2005)

the Technical Specialist responsible for oversight of security measures at a nuclear plant is the "managing agent" for the purpose of giving testimony regarding security matters; LBP-05-10, 61 NRC 241 (2005)

### EXEMPTIONS

to be granted, an exemption from a regulation must be authorized by law, not endanger life or property or the common defense and security, and otherwise be the public interest; CLI-05-14, 61 NRC 359 (2005)

### FEDERAL RULES OF CIVIL PROCEDURE

a deposition may not be excluded merely because a party is available to testify in person; LBP-05-10, 61 NRC 241 (2005)

judicial interpretations of a federal rule can serve as guidance for interpreting a similar or analogous NRC discovery rule; LBP-05-10, 61 NRC 241 (2005)

### FINANCIAL ASSURANCE

a financial plan, although not based on preclicensing funding commitments from either the licensee's partners or lending institutions, was approved; CLI-04-10, 61 NRC 131 (2005)

a reasonable cost estimate for operating and decommissioning a facility indicates that the licensee understands its funding commitment and has seriously considered the factors that will contribute to the expense of the project it is undertaking; CLI-04-27, 61 NRC 145 (2005)

an ISFSI applicant must demonstrate that it either possesses the necessary funds or has reasonable assurance of obtaining the necessary funds, or that by a combination of the two, it will have the necessary funds available to cover the estimated construction costs, operating costs over the planned life of the facility, and decommissioning costs; CLI-04-27, 61 NRC 145 (2005)

applicant must provide reasonable estimates of its construction and operating costs; CLI-05-1, 61 NRC 160 (2005)

the foundation of the NRC requirement is to protect the public from radiological hazards that could arise if the licensee is not able to meet expenses; CLI-04-27, 61 NRC 145 (2005)

the use of service contracts is allowed for the purpose of showing; CLI-04-27, 61 NRC 145 (2005)

where applicant hopes to use the license itself to attract investors, NRC approves the license subject to conditions preventing the start of operations until the licensee has long-term contracts from potential customers; CLI-04-27, 61 NRC 145 (2005)

### FINANCIAL ASSURANCE PLAN

licensee is required to identify how it will pay estimated operating costs over the planned life of the independent spent fuel storage installation; CLI-04-27, 61 NRC 145 (2005)

operating license applicants (other than utilities) are required to submit estimates for the first 5 years of costs, along with the source of funds to pay them; CLI-04-27, 61 NRC 145 (2005)

### FINANCIAL QUALIFICATIONS

a contract requiring the electric utility owner to pay all operating costs incurred by the nonutility operator is enough to establish the financial qualifications of the operator without further proof; CLI-04-27, 61 NRC 145 (2005)

an applicant must provide reasonable assurance that it will be able to cover estimated costs; CLI-04-10, 61 NRC 131 (2005)

applicant argues that it need not have agreements in a specific dollar amount because it intends to use passthrough contracts wherein the customer agrees to pay for all associated O&M costs; CLI-04-10, 61 NRC 131 (2005)

details of applicant's cost-passthrough arrangements have been withheld from the public because their release would compromise applicant's legitimate competitive concerns; CLI-05-8, 61 NRC 129 (2005)

NRC is authorized to impose appropriate standards on licensees; CLI-04-27, 61 NRC 145 (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 for the applicant; CLI-04-10, 61 NRC 131 (2005)

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### FREEDOM OF INFORMATION ACT

a proceeding on a request for information is not required to be as elaborate as a licensing or other formal proceeding; CLI-05-1, 61 NRC 160 (2005)

all that is required under Exemption 4 is a showing that a company faces both actual competition and a likelihood of substantial competitive injury; CLI-05-1, 61 NRC 160 (2005)

it is not the Commission's intent to permit a greater degree of withholding of documents from public disclosure under § 2.790 than would be permitted under FOIA; CLI-05-1, 61 NRC 160 (2005)

the D.C. Circuit decisions carry particular weight regarding the Exemption 4 issue because it oversees the United States District Court for the District of Columbia, which is the court of universal venue for FOIA cases; CLI-05-1, 61 NRC 160 (2005)

the fact that competitive harm would result from active hindrance by an opposing citizens group rather than directly by potential competitors does not affect the fairness considerations that underlie Exemption 4; CLI-05-1, 61 NRC 160 (2005)

the standards of Exemption 4 are embodied in 10 C.F.R. 2.790; CLI-05-1, 61 NRC 160 (2005)

under Exemption 4, the current legal definition of "confidential" is information whose disclosure is likely to impair the government's future ability to obtain necessary information, or impair other government interests such as compliance, program efficiency and effectiveness, and the fulfillment of an agency's statutory mandate, or cause substantial harm to the competitive position of the person from whom the information was obtained; CLI-05-1, 61 NRC 160 (2005)

### FUEL ROD

petitioner requests inventory of fuel because of pieces of fuel rods missing from their documented location in spent fuel pool; DD-05-1, 61 NRC 225 (2005)

### GROUNDWATER CONTAMINATION

if monitoring of contaminants discharged from a facility is regulated through a state groundwater discharge permit, a licensing board need not address an argument that the levels of detection and control of contamination are insufficient because this is a matter outside the board's purview; LBP-05-13, 61 NRC 385 (2005)

### HEALTH AND SAFETY

Staff's detailed technical review of applications together with the Commission's inspection and enforcement tools provide further assurance that operation will not jeopardize the public; CLI-04-27, 61 NRC 145 (2005)

### HEARINGS

although regulations suggest that an evidentiary hearing regarding environmental issues should not go forward until the final EIS has been issued, a hearing on admitted environmental contentions was conducted following issuance of the Staff's draft EIS; LBP-05-13, 61 NRC 385 (2005)

### IMMEDIATE EFFECTIVENESS

a licensee may challenge the immediate effectiveness of an enforcement order by moving to set it aside on the ground that the order is not based on adequate evidence but on mere suspicion, unfounded allegations, or error; LBP-05-2, 61 NRC 53 (2005)

Commission exercises its supervisory role over licensing and enforcement proceedings by lifting the immediate effectiveness of Staff's license suspension order when public interest and other issues have been raised; CLI-05-7, 61 NRC 69 (2005)

### IMMEDIATE EFFECTIVENESS REVIEW

adequate evidence exists when the facts and circumstances within the NRC Staff's knowledge, on which it has reasonably trustworthy information, are sufficient to warrant a person of reasonable caution to believe that the charges specified in the order are true; LBP-05-2, 61 NRC 53 (2005)

Staff must demonstrate that adequate evidence supports a conclusion that the licensee violated a Commission requirement and that the violation was willful or poses a risk to the public health, safety, or interest that requires immediate action; LBP-05-2, 61 NRC 53 (2005)

the term "willful" in section 2.202 does not contain a scienter requirement such that the Staff, to sustain an immediately effective order, must show some evidence of wrongful purpose; LBP-05-2, 61 NRC 53 (2005)

### INCORPORATION BY REFERENCE

Staff may adopt the underlying scientific data and inferences from an analysis conducted by another agency without independent review, so long as it exercises independent judgment with respect to

## SUBJECT INDEX

- conclusions about the environmental impacts relative to the current proposed agency action; LBP-05-13, 61 NRC 385 (2005)
- INDEPENDENT SPENT FUEL STORAGE INSTALLATION**
- applicants do not have to have all their other permits in hand before they can obtain an agency license; LBP-05-5, 61 NRC 108 (2005)
- if the adjudicatory process ends in the applicant's favor, the Staff is not empowered to issue the requested license, but must wait for the Commission to authorize it to do so; LBP-05-5, 61 NRC 108 (2005)
- licensee is required to identify how it will pay estimated operating costs over the planned life of the independent spent fuel storage installation; CLI-04-27, 61 NRC 145 (2005)
- INJURY**
- See Competitive Injury
- INTERLOCUTORY APPEALS**
- See Appeals, Interlocutory
- JOURNALISTS**
- objection to its magazine providing, to the NRC, tapes or notes of an interview with a nuclear plant employee who revealed safeguards information are waived; CLI-05-3, 61 NRC 8 (2005)
- JURISDICTION**
- if monitoring of contaminants discharged from a facility is regulated through a state groundwater discharge permit, a licensing board need not address an argument that the levels of detection and control of contamination are insufficient because this is a matter outside the board's purview; LBP-05-13, 61 NRC 385 (2005)
- LICENSE AMENDMENTS**
- a licensee that possesses or uses formula quantities of SSNM is required to demonstrate "reasonable assurance" of safety and to have a physical protection system that provides high assurance that activities involving special nuclear material are not inimical to the common defense and security and do not constitute an unreasonable risk to the public health and safety; LBP-05-10, 61 NRC 241 (2005)
- an application must be filed, fully describing the changes desired; LBP-05-10, 61 NRC 241 (2005)
- determinations on applications are to be guided by the considerations that govern the issuance of initial licenses or construction permits to the extent applicable and appropriate; LBP-05-10, 61 NRC 241 (2005)
- there must be "reasonable assurance" that the activities at issue will not endanger the health and safety of the public; LBP-05-10, 61 NRC 241 (2005)
- LICENSE CONDITIONS**
- a requirement for licensee to review its decommissioning costs annually is unnecessary because the Commission's regulations already require a Part 72 licensee to conduct "periodic" reviews; CLI-04-10, 61 NRC 131 (2005)
- where applicant hopes to use the license itself to attract investors, NRC approves the license subject to conditions preventing the start of operations until the licensee had long-term contracts from potential customers; CLI-04-27, 61 NRC 145 (2005)
- LICENSE TERMINATION PLANS**
- a license termination application must be supported by; CLI-05-15, 61 NRC 365 (2005)
- demonstration that the remainder of decommissioning activities will be performed in accordance with the regulations, will not be inimical to the common defense and security or to the health and safety of the public, and will not have a significant effect on the quality of the environment is required; CLI-05-15, 61 NRC 365 (2005)
- proponents of a contention addressing deficiencies in a license termination plan must demonstrate that it is within the scope of the proceeding, has an adequate basis supported by facts or opinion, and raises a genuine dispute regarding an issue material to the findings the NRC must make prior to approval of; CLI-05-15, 61 NRC 365 (2005)
- sufficient information must be provided to allow NRC to determine the extent and range of expected radioactive contamination, whether estimates for remaining decommissioning costs are reasonable, to determine the likely schedule for remaining activities, and to support the final site survey to verify compliance with Part 20 release limits; CLI-05-15, 61 NRC 365 (2005)
- the content of LTPs is described; CLI-05-15, 61 NRC 365 (2005)

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- the key question at the submission stage is whether the site characterization is sufficiently detailed to allow evaluation of the adequacy of each element; CLI-05-15, 61 NRC 365 (2005)
- unlike license termination, LTPs are implemented by license amendment, an agency action that triggers a hearing opportunity by law; CLI-05-15, 61 NRC 365 (2005)
- LICENSEE EMPLOYEES**
- a civil penalty was imposed on a licensee when its employee failed to provide information to the NRC that was complete and accurate in all respects; LBP-05-11, 61 NRC 306 (2005)
- LICENSEES**
- a civil penalty was imposed on the licensee when an employee failed to provide information to the NRC that was complete and accurate in all respects because the licensee is responsible for the actions of its employees; LBP-05-11, 61 NRC 306 (2005)
- the immediate effectiveness of an enforcement order may be challenged by moving to set it aside on the ground that the order is not based on adequate evidence but on mere suspicion, unfounded allegations, or error; LBP-05-2, 61 NRC 53 (2005)
- LICENSING BOARD DECISIONS**
- even if an EIS prepared by the Staff is found inadequate in certain respects, the ultimate NEPA judgments regarding a facility can be made on the basis of the entire record before a presiding officer, such that the EIS can be deemed to be amended pro tanto; LBP-05-13, 61 NRC 385 (2005)
- LICENSING BOARDS**
- a board is in the best position to determine the most appropriate circumstances in which safeguards information may be viewed; CLI-05-2, 61 NRC 1 (2005)
- NRC's busy boards do not sit to parse and fine-tune EISs; CLI-05-4, 61 NRC 10 (2005)
- the burden to protect its interests falls initially and primarily upon a party, but boards must take every precaution to be sure that the full import of their rulings are not misunderstood; LBP-05-12, 61 NRC 319 (2005)
- LICENSING BOARDS, AUTHORITY**
- adjudicatory tribunals have inherent authority to dismiss those matters placed before them that have been mooted by supervening developments; LBP-05-6, 61 NRC 185 (2005)
- supervisory authority generally may not be exercised over the Staff; CLI-05-2, 61 NRC 1 (2005)
- where a safety issue is not part of the formal adjudication, boards may recommend to the Commission that it consider directing the NRC Staff to examine any record evidence related to the issue and to report its analysis of the issue for such extrajudicial action as the Commission might deem appropriate; LBP-05-12, 61 NRC 319 (2005)
- MATERIAL CONTROL AND ACCOUNTING**
- petitioner requests inventory of fuel because of fuel rods missing from their documented location in spent fuel pool; DD-05-1, 61 NRC 225 (2005)
- MATERIAL INFORMATION**
- licensee is subject to a civil monetary penalty when its employee fails to provide information to the NRC that is complete and accurate in all respects; LBP-05-11, 61 NRC 306 (2005)
- section 70.23(b) of 10 C.F.R. governs what factual disputes are material in a proceeding concerning a license application to use and possess special nuclear materials; LBP-05-4, 61 NRC 71 (2005)
- MATERIALS LICENSE AMENDMENT APPLICATIONS**
- approval of the withdrawal request is appropriate because withdrawal will not prejudice any party; LBP-05-3, 61 NRC 66 (2005)
- MATERIALS LICENSE AMENDMENTS**
- applicant is ordered to provide a report detailing its past and planned efforts to gather the information necessary for the Staff to complete its technical and environmental reviews; CLI-05-13, 61 NRC 356 (2005)
- MATERIALS LICENSE PROCEEDINGS**
- section 70.23(b) of 10 C.F.R. governs what factual disputes are material in; LBP-05-4, 61 NRC 71 (2005)
- MODIFICATION ORDER**
- issuance of an order modifying individual licenses fits well within the definition of "adjudication" under the Administrative Procedure Act; CLI-05-6, 61 NRC 37 (2005)
- MONITORING**
- See Radiological Monitoring

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### MOOTNESS

in an enforcement proceeding involving a licensee's challenge to a suspension order, the licensing board is obliged to dismiss the proceeding as moot where the Staff has unconditionally withdrawn the challenged order and given assurance that another order of this type is not fairly capable of repetition; LBP-05-6, 61 NRC 185 (2005)

the Commission is not subject to the constitutional "case or controversy" requirement that prevents federal courts from deciding moot questions; CLI-05-14, 61 NRC 359 (2005)

### MOTIONS FOR RECONSIDERATION

petitions must establish an error in a Commission decision, based upon an elaboration or refinement of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification; CLI-04-27, 61 NRC 145 (2005)

### MUNITIONS

delay in hearing on decommissioning plan for site containing depleted uranium munitions is called to the Commission's attention; LBP-05-9, 61 NRC 218 (2005)

### NATIONAL ENVIRONMENTAL POLICY ACT

a procedural requirement is imposed on an agency's decisionmaking process by mandating that an agency consider the environmental impacts of a proposed action and inform the public that it has taken those impacts into account in making its decision; LBP-05-8, 61 NRC 202 (2005)

agencies are given broad discretion in determining how thoroughly to analyze a particular subject and may decline to examine issues the agency in good faith considers "remote and speculative" or "inconsequentially small"; LBP-05-13, 61 NRC 385 (2005)

agencies must take a "hard look" at the environmental impacts of a proposed action, as well as reasonable alternatives to that action; LBP-05-8, 61 NRC 202 (2005); LBP-05-13, 61 NRC 385 (2005) although petitioners might prefer different language or emphasis in the environmental report, "editing"

NEPA documents is not a function of the Commission's hearing process; CLI-05-4, 61 NRC 10 (2005) although the draft EIS may rely in part on the environmental report, the Staff is required to independently evaluate and be responsible for the reliability of all information used in the draft EIS; LBP-05-13, 61 NRC 385 (2005)

an agency is required to evaluate alternatives to a proposed federal action; LBP-05-5, 61 NRC 108 (2005) content of an environmental report for a Part 70 license for a uranium enrichment facility is described; LBP-05-13, 61 NRC 385 (2005)

if monitoring of contaminants discharged from a facility is regulated through a state groundwater discharge permit, a licensing board need not address an argument that the levels of detection and control of contamination are insufficient, because this is a matter outside the board's purview; LBP-05-13, 61 NRC 385 (2005)

in conducting a NEPA review, the NRC Staff is governed by a "rule of reason" whereby only "reasonably foreseeable" impacts need to be addressed; LBP-05-8, 61 NRC 202 (2005)

in seeking to address the need for its proposed enrichment facility, an applicant is not required to present a business plan, to make its "business case," or to demonstrate the profitability of its proposed facility, nor is it under any obligation to provide a detailed market analysis; LBP-05-13, 61 NRC 385 (2005)

in the context of projecting market supply and demand, the relevant inquiry is not whether the assumptions made are perfect or unchallengeable, but whether they are reasonable; LBP-05-13, 61 NRC 385 (2005)

it is within the agency's discretion to rely on an EIS, draft or otherwise, prepared by another federal agency if such reliance will aid in the presentation of issues, eliminate repetition, or reduce the length of an EIS; LBP-05-13, 61 NRC 385 (2005)

regulations promulgated by the Council on Environmental Quality to provide agency guidance on NEPA compliance are not binding on the NRC when the agency has not expressly adopted them, but they are entitled to considerable deference; LBP-05-13, 61 NRC 385 (2005)

the Board's inquiry into the need for a facility should focus upon the projected demand (based on current operating and anticipated new reactors) and the expected supply based upon the actual commitments or statements of the parties involved in supply production; LBP-05-13, 61 NRC 385 (2005)

the "cumulative impacts" rubric, that an agency take into account reasonably foreseeable results of current federal actions, imposes a rule against incrementalism, that is, against analyzing a succession of contemplated federal actions in a series, as separate, unrelated activities; LBP-05-5, 61 NRC 108 (2005)

## SUBJECT INDEX

- the licensing board's job is to ensure that the agency has adequately considered and disclosed the environmental impact of its actions; LBP-05-13, 61 NRC 385 (2005)
- the ultimate responsibility for NEPA compliance rests with the Staff; LBP-05-13, 61 NRC 385 (2005)
- under Council on Environmental Quality regulations, an agency EIS must address both direct and indirect effects of an action; LBP-05-13, 61 NRC 385 (2005)
- when reviewing a license application filed by a private applicant, as opposed to a federally sponsored project, an agency may give substantial weight to the stated preferences of the applicant with regard to issues such as site selection and facility design; LBP-05-13, 61 NRC 385 (2005)
- without evidence to the contrary, poverty-driven inadequacies in emergency response are assumed to affect all county residents equally; CLI-05-4, 61 NRC 10 (2005)
- NO SIGNIFICANT HAZARDS DETERMINATION**
- Staff's finding is final, subject only to the Commission's discretion, on its own initiative, to review it; CLI-05-14, 61 NRC 359 (2005)
- NRC POLICY**
- boards and presiding officers are encouraged to certify novel legal or policy questions early in a proceeding; CLI-05-14, 61 NRC 359 (2005)
- disclosure of proprietary information is generally disfavored; CLI-05-1, 61 NRC 160 (2005)
- encouraging settlement not only can lead to reducing the costs and burdens of litigation, but can also bring more satisfying outcomes than those produced by litigation, allowing both sides to a controversy to reconcile their philosophical differences by reaching mutually agreeable practical resolutions; LBP-05-1, 61 NRC 45 (2005)
- to the extent it is not inconsistent with hearing requirements, the fair and reasonable settlement of contested initial licensing proceedings is encouraged; CLI-05-1, 61 NRC 160 (2005); LBP-05-11, 61 NRC 306 (2005)
- NRC STAFF**
- licensing boards generally may not exercise supervisory authority over; CLI-05-2, 61 NRC 1 (2005)
- licensing boards have no jurisdiction over the Staff's performance of the responsibilities it fulfills outside the hearing process but may recommend to the Commission that it consider directing the Staff to examine any record evidence related to the issue; LBP-05-12, 61 NRC 319 (2005)
- the Commission gives considerable weight to the Staff's position on redaction of proprietary information; CLI-05-1, 61 NRC 160 (2005)
- the ultimate responsibility for NEPA compliance rests with; LBP-05-13, 61 NRC 385 (2005)
- when an immediately effective enforcement order is challenged, Staff must demonstrate that adequate evidence supports a conclusion that the licensee violated a Commission requirement and that the violation was willful or poses a risk to the public health, safety, or interest that requires immediate action; LBP-05-2, 61 NRC 53 (2005)
- NRC STAFF REVIEW**
- NEPA imposes a procedural requirement on an agency's decisionmaking process by mandating that an agency consider the environmental impacts of a proposed action and inform the public that it has taken those impacts into account in making its decision; LBP-05-8, 61 NRC 202 (2005)
- Staff is governed by a "rule of reason" whereby only "reasonably foreseeable" impacts need be addressed; LBP-05-8, 61 NRC 202 (2005)
- the presiding officer's jurisdiction in materials license amendment proceedings does not extend to superintending the Staff's discharge of its review functions; LBP-05-9, 61 NRC 218 (2005)
- NUCLEAR REGULATORY COMMISSION**
- if monitoring of contaminants discharged at a facility is regulated through a state groundwater discharge permit, a licensing board need not address an argument that the levels of detection and control of contamination are insufficient because this is a matter outside the board's purview; LBP-05-13, 61 NRC 385 (2005)
- in granting review of certified questions, the Commission follows its customary practice of accepting Board-certified questions; CLI-05-9, 61 NRC 235 (2005)
- interaction with the public outside the adjudicatory process should avoid unnecessarily precipitating or promoting resident opposition, such as by creating the impression of a preordained result relative to the licensing requests; LBP-05-1, 61 NRC 45 (2005)

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### NUCLEAR REGULATORY COMMISSION, AUTHORITY

acting as an appellate body, the Commission is free to affirm a board decision on any ground finding support in the record, whether previously relied upon or not; CLI-05-1, 61 NRC 160 (2005)

although the Commission has the authority to reject or modify a licensing board's factual finding, it will not do so simply because it might have reached a different result; CLI-05-1, 61 NRC 160 (2005)

Commission exercises its supervisory role over licensing and enforcement proceedings by lifting the immediate effectiveness of Staff's license suspension order when public interest and other issues have been raised; CLI-05-7, 61 NRC 69 (2005)

in exercise of its sua sponte authority, the Commission reviews unappealed Board orders; CLI-05-10, 61 NRC 238 (2005)

NRC has discretion under the Administrative Procedure Act and the Atomic Energy Act to impose binding, prospectively applicable legal requirements by rulemaking or adjudication; CLI-05-6, 61 NRC 37 (2005)

review of initial board decisions, or partial initial decisions, may be granted on the basis of any consideration the Commission deems to be in the public interest; CLI-04-10, 61 NRC 131 (2005)

the Atomic Energy Act authorizes the agency to impose appropriate financial qualifications standards on licensees; CLI-04-27, 61 NRC 145 (2005)

the Commission is not subject to the constitutional "case or controversy" requirement that prevents federal courts from deciding moot questions; CLI-05-14, 61 NRC 359 (2005)

### ORDERS

See Enforcement Orders

### PERMITS

applicants do not have to have all their other permits in hand before they can obtain an agency license; LBP-05-5, 61 NRC 108 (2005)

### PHYSICAL SECURITY

exemptions from regulations may be granted if they are authorized by law, will not endanger life or property or the common defense and security, and are otherwise in the public interest; LBP-05-10, 61 NRC 241 (2005)

the physical protection system for possession of SSNM must be designed to protect against the design basis threats of theft or diversion and radiological sabotage; LBP-05-10, 61 NRC 241 (2005)

### PLEADINGS

a motion challenging the immediate effectiveness of an enforcement order must state with particularity the reasons why the order is not based on adequate evidence and must be accompanied by affidavits or other evidence relied upon; LBP-05-2, 61 NRC 53 (2005)

### PRESIDING OFFICER

encouragement of parties toward settlement that is reasonably and responsibly offered can be of significant benefit to the settlement process; LBP-05-1, 61 NRC 45 (2005)

### PRESIDING OFFICER, JURISDICTION

in informal proceedings, the presiding officer cannot superintend the Staff's discharge of its review functions; LBP-05-9, 61 NRC 218 (2005)

### PROBABILISTIC RISK ASSESSMENT

adequacy of the analyses of the likelihood of a significant earthquake in the East Tennessee Seismic Zone and the fuel facility's response to it are discussed; LBP-05-4, 61 NRC 71 (2005)

### PROPRIETARY INFORMATION

applicants seeking redaction of such information must address the criteria of section 2.790(b)(4)(i)-(v) with specificity; CLI-05-1, 61 NRC 160 (2005)

details of applicant's cost-passthrough arrangements have been withheld from the public because their release would compromise applicant's legitimate competitive concerns; CLI-05-8, 61 NRC 129 (2005)

disclosure to the public of such information from a settlement would not only undermine one of the principal grounds of that settlement, but would also discourage parties from settling their financial disputes in the future, for fear that we would likewise publicly disclose the proprietary information in their settlements; CLI-05-1, 61 NRC 160 (2005)

if the Commission determines that any information is confidential commercial or financial information, then it must determine whether the right of the public to be fully apprised as to the bases for and

## SUBJECT INDEX

- effects of the proposed action outweighs the demonstrated concern for protection of a competitive position; CLI-05-1, 61 NRC 160 (2005)
- it is important for nuclear industry participants to feel free to innovate, with no fear that the proprietary data associated with their innovations will casually be released to the public; CLI-05-1, 61 NRC 160 (2005)
- longstanding Commission policy disfavors disclosure of; CLI-05-1, 61 NRC 160 (2005)
- the agency will withhold from the public, commercial or financial information obtained from a person and that is privileged or confidential; CLI-05-1, 61 NRC 160 (2005)
- the Commission gives considerable weight to the Staff's position on redaction of; CLI-05-1, 61 NRC 160 (2005)
- the Commission need not engage in a sophisticated economic analysis of the substantial competitive harm that might result from disclosure of; CLI-05-1, 61 NRC 160 (2005)
- PROTECTIVE ORDERS**
- parties are compelled to protect the information in a manner consistent with the requirements outlined in 10 C.F.R. § 73.21; CLI-05-2, 61 NRC 1 (2005)
- PUBLIC INTEREST**
- Commission jurisprudence has long provided that various repose doctrines must give way in favor of; CLI-04-27, 61 NRC 145 (2005)
- in approving a proposed settlement, the Licensing Board is required to give due consideration to; LBP-05-11, 61 NRC 306 (2005)
- the Commission exercises its supervisory role over licensing and enforcement proceedings by lifting the immediate effectiveness of Staff's license suspension order; CLI-05-7, 61 NRC 69 (2005)
- RADIOACTIVE WASTE, LOW-LEVEL**
- greater-than-Class-C waste is a low-level radioactive waste that exceeds the concentration limits of radionuclides established for Class C waste in 10 C.F.R. 61.55; CLI-05-5, 61 NRC 22 (2005)
- greater-than-Class-C wastes are generally unacceptable for near-surface disposal, although they may be approved on a case-by-case basis and with proposed special processing or design; CLI-05-5, 61 NRC 22 (2005)
- if greater-than-Class-C waste were sent to a geologic repository governed under Part 60, it would still be low-level radioactive waste; CLI-05-5, 61 NRC 22 (2005)
- the definition of low-level radioactive waste is the same in the USEC Privatization Act and the Low-Level Radioactive Waste Policy Act; CLI-05-5, 61 NRC 22 (2005)
- RADIOACTIVE WASTE DISPOSAL**
- classification of wastes for near-surface disposal is determined by amounts of long-lived and short-lived radionuclides and whether dose levels will drop to acceptable levels over specified periods of time; CLI-05-5, 61 NRC 22 (2005)
- greater-than-Class-C wastes are generally unacceptable for near-surface disposal, although they may be approved on a case-by-case basis and with proposed special processing or design; CLI-05-5, 61 NRC 22 (2005)
- low-level radioactive wastes must meet the performance objectives of 10 C.F.R. Part 61, Subpart C; CLI-05-5, 61 NRC 22 (2005)
- status of DOE's Standard Contract for Disposal of Spent Nuclear Fuel and/or High Level Radioactive Waste is discussed; CLI-05-12, 61 NRC 345 (2005)
- RADIOLOGICAL MONITORING**
- if monitoring of contaminants discharged from a facility is regulated through a state groundwater discharge permit, a licensing board need not address an argument that the levels of detection and control of contamination are insufficient because this is a matter outside the board's purview; LBP-05-13, 61 NRC 385 (2005)
- RECONSIDERATION**
- See Motions for Reconsideration
- RECORDKEEPING**
- NRC is considering escalated enforcement action for an apparent violation of material control and accounting of special nuclear material related to two spent fuel rod pieces missing from their documented location in the spent fuel pool; DD-05-1, 61 NRC 225 (2005)



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### REFERRAL OF RULING

legal questions about the interpretation of the design-basis-threat regulatory requirements that arise in the course of considering the admission of contentions or later in the adjudication should be referred to the Commission for appropriate guidance; CLI-05-14, 61 NRC 359 (2005)  
where intervenor raises purely procedural and legal challenges to NRC action that do not require factfinding, referral to a licensing board is unnecessary; CLI-05-6, 61 NRC 37 (2005)

### REFERRED RULINGS

serious, immediate, and irreparable harm is one of the grounds for grant of discretionary review of; CLI-05-2, 61 NRC 1 (2005)

### REGULATIONS

an exemption from a regulation must be authorized by law, not endanger life or property or the common defense and security, and otherwise be the public interest; CLI-05-14, 61 NRC 359 (2005)  
Council of Environmental Quality regulations provide agency guidance on NEPA compliance and are not binding on the NRC when the agency has not expressly adopted them, but they are entitled to considerable deference; LBP-05-13, 61 NRC 385 (2005)  
exemptions from the requirements of Part 11 may be granted if they are authorized by law and will not constitute an undue risk to the common defense and security; LBP-05-10, 61 NRC 241 (2005)  
exemptions from the requirements of Part 73 may be granted if they are authorized by law, will not endanger life or property or the common defense and security, and are otherwise in the public interest; LBP-05-10, 61 NRC 241 (2005)  
when there is a Commission regulation, duly promulgated, coexisting with other precedent in the general area, the regulation is controlling; CLI-05-1, 61 NRC 160 (2005)

### REGULATIONS, INTERPRETATION

judicial interpretations of a federal rule can serve as guidance for interpreting a similar or analogous NRC discovery rule; LBP-05-10, 61 NRC 241 (2005)  
of 10 C.F.R. 2.786(g); CLI-05-2, 61 NRC 1 (2005)  
of 10 C.F.R. Part 61 performance objectives applicable to any form of land disposal of low-level radioactive waste; CLI-05-5, 61 NRC 22 (2005)  
of 10 C.F.R. 70.64(b); LBP-05-13, 61 NRC 385 (2005)  
regarding the language, "small group with . . . the ability to operate as two *or* more teams," a licensee covered by 10 C.F.R. 73.1(a)(2)(i)(F) is required to be prepared to defend itself against an adversary group with the ability to operate in alternative configurations of two teams or in more than two teams; LBP-05-10, 61 NRC 241 (2005)  
the term "willful" in 10 C.F.R. 2.202 does not contain a scienter requirement such that the Staff, to sustain an immediately effective order, must show some evidence of wrongful purpose; LBP-05-2, 61 NRC 53 (2005)  
where the meaning of a regulation is clear and obvious, the regulatory language is conclusive and must be enforced as written; LBP-05-10, 61 NRC 241 (2005)

### REOPENING A RECORD

a motion made in connection with the environmental issues raised in contentions addressed in a decision would necessarily also require a showing to support reopening; LBP-05-13, 61 NRC 385 (2005)  
an intervenor's objections must materially alter the result of the hearing; CLI-04-10, 61 NRC 131 (2005)  
the new information must be significant and plausible enough to require reasonable minds to inquire further; CLI-05-12, 61 NRC 345 (2005)  
there would be little hope of completing administrative proceedings if each newly arising allegation required reopening a record; CLI-05-12, 61 NRC 345 (2005)  
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; CLI-05-12, 61 NRC 345 (2005); LBP-05-5, 61 NRC 108 (2005)

### REPLY BRIEFS

new arguments may not be raised for the first time in; CLI-05-14, 61 NRC 359 (2005)

### REPOSE DOCTRINES

Commission jurisprudence has long provided that various repose doctrines must give way where changed circumstances or public-interest factors dictate; CLI-04-27, 61 NRC 145 (2005)

## SUBJECT INDEX

### REVIEW

See Appellate Review; Immediate Effectiveness Review; NRC Staff Review

### REVIEW, SUA SPONTE

the Commission has the authority to review interlocutory and final licensing board decisions on its own motion; CLI-05-14, 61 NRC 359 (2005)

the Commission is not subject to the constitutional "case or controversy" requirement that prevents federal courts from deciding moot questions; CLI-05-14, 61 NRC 359 (2005)

### RULE OF REASON

the NEPA requirement for a "hard look" at the environmental impacts of a proposed action is subject to a "rule of reason" in that the consideration of environmental impacts need not address every impact that could possibly result, but rather only those that are reasonably foreseeable or have some likelihood of occurring; LBP-05-13, 61 NRC 385 (2005)

### RULEMAKING

NRC has discretion under the Administrative Procedure Act and the Atomic Energy Act to impose binding, prospectively applicable legal requirements by; CLI-05-6, 61 NRC 37 (2005)

the fact that no one requested a hearing to challenge the substance of NRC's spent fuel security orders does not transform the proceeding from adjudication into; CLI-05-6, 61 NRC 37 (2005)

### RULES OF PRACTICE

a licensing board cannot admit to a proceeding a contention formulated as a bare assertion without factual underpinning; LBP-05-5, 61 NRC 108 (2005)

although regulations suggest that an evidentiary hearing regarding environmental issues should not go forward until the final EIS has been issued, a hearing on admitted environmental contentions was conducted following issuance of the Staff's draft EIS; LBP-05-13, 61 NRC 385 (2005)

criteria for contention admission are strict by design and should be rigorously followed by NRC adjudicatory bodies; CLI-05-15, 61 NRC 365 (2005)

for construction permit and operating license proceedings involving nuclear power reactors, the Commission generally has recognized a presumption of standing to intervene for those persons who have frequent contacts with the area; CLI-05-11, 61 NRC 309 (2005)

if, in implementing a security order, licensees perceive a conflict between the baseline requirements of NRC regulations and the supplemental requirements of the order, the more stringent requirement applies; CLI-05-6, 61 NRC 37 (2005)

in an enforcement proceeding involving a licensee's challenge to a suspension order, the Licensing Board is obliged to dismiss the proceeding as moot where the Staff has unconditionally withdrawn the challenged order and given assurance that another order of this type is not fairly capable of repetition; LBP-05-6, 61 NRC 185 (2005)

in granting review of certified questions, the Commission follows its customary practice of accepting Board-certified questions; CLI-05-9, 61 NRC 235 (2005)

in limiting the sites at which parties may examine security-related documents, boards may also take into account the practical concerns and delays that may stem from such limitations in individual cases; CLI-05-2, 61 NRC 1 (2005)

in reviewing an "interlocutory appeal as of right" from an applicant or licensee challenging the admissibility of contentions, the Commission considers whether the request for hearing and/or petition to intervene should have been wholly denied; CLI-05-15, 61 NRC 365 (2005)

it is difficult to find serious, immediate, and irreparable harm where there is no evidence that the board order has strayed from the Commission's regulations regarding the protection of safeguards information; CLI-05-2, 61 NRC 1 (2005)

legal questions about the interpretation of the design-basis-threat regulatory requirements that arise in the course of considering the admission of contentions or later in the adjudication should be referred to the Commission for appropriate guidance; CLI-05-14, 61 NRC 359 (2005)

license termination plans, unlike license termination, are implemented by license amendment, an agency action that triggers a hearing opportunity by law; CLI-05-15, 61 NRC 365 (2005)

motions under section 2.749 are analogous to summary judgment motions under Rule 56 of the Federal Rules of Civil Procedure and should be evaluated under the same standards; LBP-05-4, 61 NRC 71 (2005)

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new rules establish a less formal hearing process for reactor licensing cases and give the petitioners 60 days to file contentions; CLI-05-4, 61 NRC 10 (2005)

reconsideration petitions must establish an error in a Commission decision, based upon an elaboration or refinement of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification; CLI-04-27, 61 NRC 145 (2005)

serious, immediate, and irreparable harm is one of the grounds for grant of discretionary interlocutory review; CLI-05-2, 61 NRC 1 (2005)

standing may be based upon a genuine property interest located in close geographic proximity to a facility, where there is a significant source of radioactivity and an obvious potential for radiological damage to the property from the facility; CLI-05-11, 61 NRC 309 (2005)

summary disposition is available for all or any matters in a Subpart L proceeding; LBP-05-4, 61 NRC 71 (2005)

the Chief Administrative Judge certifies common and novel questions related to the proper conduct of mandatory hearings to the Commission for its consideration and resolution; LBP-05-7, 61 NRC 188 (2005)

the Commission has long looked for guidance to current judicial concepts of standing, which require a concrete and particularized injury that is fairly traceable to the challenged action and likely to be redressed by a favorable decision; CLI-05-11, 61 NRC 309 (2005)

the Commission has the authority to review interlocutory and final licensing board decisions on its own motion; CLI-05-14, 61 NRC 359 (2005)

the Commission is not subject to the constitutional "case or controversy" requirement that prevents federal courts from deciding moot questions; CLI-05-14, 61 NRC 359 (2005)

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; CLI-05-12, 61 NRC 345 (2005); LBP-05-5, 61 NRC 108 (2005)

to reopen a closed hearing record at the last minute, the information must be significant and plausible enough to require reasonable minds to inquire further; CLI-05-12, 61 NRC 345 (2005)

when a contention focuses on the Staff's purported failure to provide an explanation relative to certain calculations, that contention asserts a contention of omission which, upon cure, becomes moot; LBP-05-13, 61 NRC 385 (2005)

### RULINGS

in the early stages of litigation, boards frequently must consider numerous contentions and are expected to act promptly, necessitating reasonable brevity in; CLI-05-4, 61 NRC 10 (2005)

### SAFEGUARDS INFORMATION

in issuing spent fuel security requirements to four licensees, the Commission chose to act by adjudication rather than rulemaking so that the orders could be tailored to the peculiar needs of individual licensees if necessary, and to protect sensitive information; CLI-05-6, 61 NRC 37 (2005)

in limiting the sites at which parties may examine security-related documents, boards may also take into account the practical concerns and delays that may stem from such limitations in individual cases; CLI-05-2, 61 NRC 1 (2005)

it is difficult to find serious, immediate, and irreparable harm where there is no evidence that the board order has strayed from the Commission's regulations regarding the protection of; CLI-05-2, 61 NRC 1 (2005)

### SECRETARY OF THE COMMISSION

scope of authority includes ruling on procedural matters such as motions for enlargement of time or to expand the page numbers of briefs; CLI-05-12, 61 NRC 345 (2005)

### SECURITY

in issuing spent fuel security requirements to four licensees, the Commission chose to act by adjudication rather than rulemaking so that the orders could be tailored to the peculiar needs of individual licensees if necessary, and to protect safeguards information; CLI-05-6, 61 NRC 37 (2005)

### SEISMIC DESIGN

adequacy of the analyses of the likelihood of a significant earthquake and the fuel facility's response to it are discussed; LBP-05-4, 61 NRC 71 (2005)

## SUBJECT INDEX

### SETTLEMENT AGREEMENTS

a civil penalty imposed on a licensee when its employee failed to provide information to the NRC that was complete and accurate in all respects was reduced; LBP-05-11, 61 NRC 306 (2005)

a licensing board is required to give due consideration to the public interest in approval of; LBP-05-11, 61 NRC 306 (2005); LBP-05-14, 61 NRC 448 (2005)

although disclosure of the settlement-related information might cause applicant "financial" harm, the harm would not be "competitive," and therefore would not cause substantial harm to the competitive position of the owner of the information; CLI-05-1, 61 NRC 160 (2005)

disclosure to the public of proprietary information from a settlement would not only undermine one of the principal grounds of that settlement, but would also discourage parties from settling their financial disputes in the future, for fear that we would likewise publicly disclose the proprietary information in their settlements; CLI-05-1, 61 NRC 160 (2005)

encouraging settlement not only can lead to reducing the costs and burdens of litigation, but can also bring more satisfying outcomes than those produced by litigation, allowing both sides to a controversy to reconcile their philosophical differences by reaching mutually agreeable practical resolutions; LBP-05-1, 61 NRC 45 (2005)

interaction with the public outside the adjudicatory process should avoid unnecessarily precipitating or promoting resident opposition, such as by creating the impression of a preordained result relative to the licensing requests; LBP-05-1, 61 NRC 45 (2005)

to the extent it is not inconsistent with hearing requirements, the fair and reasonable settlement of contested initial licensing proceedings is encouraged; CLI-05-1, 61 NRC 160 (2005); LBP-05-11, 61 NRC 306 (2005)

### SETTLEMENT NEGOTIATIONS

disclosure requests have been refused where the information's release will harm the negotiating position of a party in any future; CLI-05-1, 61 NRC 160 (2005)

privilege is recognized, although not in a FOIA context; CLI-05-1, 61 NRC 160 (2005)

### SITE CHARACTERIZATION

more than methodologies or plans is required for; CLI-05-15, 61 NRC 365 (2005)

### SITE CHARACTERIZATION PLANS

the Commission declines to develop a "bright line" test for when a plan is "final" or "complete" enough to support approval of an LTP; CLI-05-15, 61 NRC 365 (2005)

their purpose is to define relevant features of the soil, water, and buildings in order to assess risks and develop adequate plans to complete decommissioning; CLI-05-15, 61 NRC 365 (2005)

### SITE REMEDIATION

the Commission declines to develop a "bright line" test for when a plan is "final" or "complete" enough to support approval of an LTP; CLI-05-15, 61 NRC 365 (2005)

### SITE SELECTION

when reviewing a license application filed by a private applicant, as opposed to a federally sponsored project, an agency may give substantial weight to the stated preferences of the applicant; LBP-05-13, 61 NRC 385 (2005)

### SPENT FUEL

petitioner requests inventory of fuel because of fuel rods missing from their documented location in spent fuel pool; DD-05-1, 61 NRC 225 (2005)

status of DOE's Standard Contract for Disposal of Spent Nuclear Fuel and/or High Level Radioactive Waste is discussed; CLI-05-12, 61 NRC 345 (2005)

### SPENT FUEL STORAGE CASKS

application of a ductility ratio in determining the strength of canisters to resist an aircraft crash impact is discussed; LBP-05-12, 61 NRC 319 (2005)

### STANDARD OF PROOF

application of the "adequate evidence" standard in the context of immediately effective orders strikes a reasonable balance between the Commission's ability to protect the public health, safety, or interest and providing affected parties with a measure of protection against arbitrary enforcement action by the Commission; LBP-05-2, 61 NRC 53 (2005)

## SUBJECT INDEX

### STANDING TO INTERVENE

a genuine property interest located in close geographic proximity to a facility, where there is a significant source of radioactivity and an obvious potential for radiological damage to the property from the facility, may be the basis for; CLI-05-11, 61 NRC 309 (2005)

for construction permit and operating license proceedings involving nuclear power reactors, the Commission generally has recognized a presumption of standing for those persons who have frequent contacts with the area; CLI-05-11, 61 NRC 309 (2005)

in nonreactor cases, there is no presumption of standing based upon geographic proximity, absent a determination that the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; CLI-05-11, 61 NRC 309 (2005)

the Commission has long looked for guidance to current judicial concepts, which require a concrete and particularized injury that is fairly traceable to the challenged action and likely to be redressed by a favorable decision; CLI-05-11, 61 NRC 309 (2005)

the potential for injury must be actual or imminent; CLI-05-11, 61 NRC 309 (2005)

### STATE REGULATORY REQUIREMENTS

if monitoring of contaminants discharged from a facility is regulated through a state groundwater discharge permit, a licensing board need not address an argument that the levels of detection and control of contamination are insufficient, because this is a matter outside the board's purview; LBP-05-13, 61 NRC 385 (2005)

### STORAGE CANISTERS

application of a ductility ratio in determining the strength of canisters to resist an aircraft crash impact is discussed; LBP-05-12, 61 NRC 319 (2005)

### STRATEGIC SPECIAL NUCLEAR MATERIAL

a licensee that possesses or uses formula quantities is required to demonstrate "reasonable assurance" of safety and to have a physical protection system that provides high assurance that activities involving SSNM are not inimical to the common defense and security and do not constitute an unreasonable risk to the public health and safety; LBP-05-10, 61 NRC 241 (2005)

the physical protection system for possession of formula quantities must be designed to protect against the design basis threats of theft or diversion and radiological sabotage; LBP-05-10, 61 NRC 241 (2005)

### SUBPOENAS

quashing of subpoena is conditioned on journalist's waiver of any objection to his magazine providing, to the NRC, tapes or notes of an interview with a nuclear plant employee who revealed safeguards information; CLI-05-3, 61 NRC 8 (2005)

### SUMMARY DISPOSITION

because the burden of proof is on the movant, the evidence submitted must be construed in favor of the opposing party, who receives the benefit of any favorable inferences that can be drawn; LBP-05-4, 61 NRC 71 (2005)

if the nonmoving party fails to oppose any material fact properly set out in the moving party's statement of material facts that accompanies the motion, then that fact will be deemed admitted; LBP-05-4, 61 NRC 71 (2005)

motions under 10 C.F.R. § 2.749 are analogous to summary judgment motions under Rule 56 of the Federal Rules of Civil Procedure and should be evaluated under the same standards; LBP-05-4, 61 NRC 71 (2005)

quotations from or citations to the published work of researchers who have apparently reached conclusions at variance with the movant's affiants likely will be insufficient to defeat a motion for; LBP-05-4, 61 NRC 71 (2005)

summary judgment is not appropriate where it would require a determination of the credibility of witnesses; LBP-05-4, 61 NRC 71 (2005)

the nonmoving party cannot avoid summary disposition by presenting an unsupported opinion of an expert; LBP-05-4, 61 NRC 71 (2005)

the party opposing summary disposition must set forth specific facts showing that there is a genuine issue; LBP-05-4, 61 NRC 71 (2005)

to be considered a genuine issue, the factual record, considered in its entirety, must be enough in doubt that there is a reason to hold a hearing to resolve the issue; LBP-05-4, 61 NRC 71 (2005)

## SUBJECT INDEX

where there is a disagreement among competing experts over material facts, a hearing, if permitted by the applicable procedures, is the appropriate forum for the trier of fact to weigh the competing expert opinions on material facts; LBP-05-4, 61 NRC 71 (2005)

### TERMINATION OF LICENSE

a license termination application must be supported by a license termination plan; CLI-05-15, 61 NRC 365 (2005)

license termination plans, unlike license termination, are implemented by license amendment, an agency action that triggers a hearing opportunity by law; CLI-05-15, 61 NRC 365 (2005)

the Commission declines to develop a "bright line" test for when a site characterization or site remediation plan is "final" or "complete" enough to support approval of an LTP; CLI-05-15, 61 NRC 365 (2005)

### TERMINATION OF PROCEEDING

approval of licensee's request for withdrawal of license amendment application is grounds for; LBP-05-3, 61 NRC 66 (2005)

in an enforcement proceeding involving a licensee's challenge to a suspension order, the licensing board is obliged to dismiss the proceeding as moot where the Staff has unconditionally withdrawn the challenged order and given assurance that another order of this type is not fairly capable of repetition; LBP-05-6, 61 NRC 185 (2005)

### TESTIMONY

an expert's method for forming an opinion need not be generally recognized in the scientific community, but the opinion must be based on the methods and procedures of science rather than on subjective belief or unsupported speculation; LBP-05-4, 61 NRC 71 (2005)

an opinion of an expert is admissible only if it would assist the trier of facts in understanding the evidence or determining a fact in issue, and the opinion is based upon sufficient facts or data to be the product of reliable principles and methods that the witness applies to the facts of the case; LBP-05-4, 61 NRC 71 (2005)

where there is a disagreement among competing experts over material facts, summary disposition may not be appropriate if it would require the trier of fact to untangle the expert affidavits and decide which experts are more correct; LBP-05-4, 61 NRC 71 (2005)

### TRANSPORTATION OF SPENT FUEL

an alternative that requires nuclear waste to be shipped cross-country from the originating reactor to a temporary storage facility, back cross-country to the originating reactor for "recontainerization," and back again cross-country to a permanent repository seems far less attractive than an alternative that requires only shipment from the originating reactor cross-country to a temporary storage facility, then to a nearby permanent repository all in the same container; LBP-05-5, 61 NRC 108 (2005)

in issuing security requirements to four licensees, the Commission chose to act by adjudication rather than rulemaking so that the orders could be tailored to the peculiar needs of individual licensees if necessary, and to protect safeguards information; CLI-05-6, 61 NRC 37 (2005)

### URANIUM

See Depleted Uranium

### URANIUM ENRICHMENT FACILITIES

the Department of Energy must accept for disposal depleted uranium from any NRC uranium enrichment licensee, if depleted uranium is ultimately determined to be low-level radioactive waste; CLI-05-5, 61 NRC 22 (2005)

### URANIUM ENRICHMENT FACILITY PROCEEDINGS

the Chief Administrative Judge certifies common and novel questions related to the proper conduct of mandatory hearings to the Commission for its consideration and resolution; LBP-05-7, 61 NRC 188 (2005)

### USEC PRIVATIZATION ACT

"low-level radioactive waste" has the same meaning as that set forth in section 2(9) of the Low-Level Radioactive Waste Policy Act; CLI-05-5, 61 NRC 22 (2005)

the Department of Energy must accept for disposal depleted uranium from any NRC uranium enrichment licensee, if depleted uranium is ultimately determined to be low-level radioactive waste; CLI-05-5, 61 NRC 22 (2005)

## SUBJECT INDEX

### VIOLATIONS

a licensee willfully violates a Commission requirement if it intentionally performs an act that it knows is prohibited (willful commission), or intentionally fails to perform an act that it knows is required (willful omission), or engages in conduct that may be characterized as careless disregard of requirements; LBP-05-2, 61 NRC 53 (2005)

NRC is considering escalated enforcement action for an apparent violation of material control and accounting of special nuclear material recordkeeping related to two spent fuel rod pieces missing from their documented location in spent fuel pool; DD-05-1, 61 NRC 225 (2005)

### WASTE DISPOSAL

See Radioactive Waste Disposal

### WITHDRAWAL

approval of the request is appropriate because it will not prejudice any party; LBP-05-3, 61 NRC 66 (2005)

### WITNESSES, EXPERT

a witness qualifies as an expert by knowledge, skill, experience, training, or education; LBP-05-4, 61 NRC 71 (2005)

an expert's method for forming an opinion need not be generally recognized in the scientific community, but the opinion must be based on the methods and procedures of science rather than on subjective belief or unsupported speculation; LBP-05-4, 61 NRC 71 (2005)

summary judgment is not appropriate where it would require a determination of the credibility of; LBP-05-4, 61 NRC 71 (2005)

where there is a disagreement among competing experts over material facts, summary disposition may not be appropriate if it would require the trier of fact to untangle the expert affidavits and decide which experts are more correct; LBP-05-4, 61 NRC 71 (2005)

See also Evidence

## FACILITY INDEX

AMERICAN CENTRIFUGE PLANT; Docket No. 70-7004  
MATERIALS LICENSE; April 20, 2005; MEMORANDUM AND ORDER; CLI-05-9, 61 NRC 235 (2005)  
MATERIALS LICENSE; May 12, 2005; MEMORANDUM AND ORDER; CLI-05-11, 61 NRC 309 (2005)

CATAWBA NUCLEAR STATION, Units 1 and 2; Docket Nos. 50-413-OLA, 50-414-OLA  
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OPERATING LICENSE AMENDMENT; April 18, 2005 (Original issue date March 10, 2005); FINAL PARTIAL INITIAL DECISION — PUBLIC REDACTED VERSION (Issues Relating to BREDL Security Contention 5); LBP-05-10, 61 NRC 241 (2005)  
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OPERATING LICENSE AMENDMENT; June 20, 2005; MEMORANDUM AND ORDER; CLI-05-14, 61 NRC 359 (2005)

NATIONAL ENRICHMENT FACILITY; Docket No. 70-3103-ML  
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MATERIALS LICENSE; April 20, 2005; MEMORANDUM AND ORDER; CLI-05-9, 61 NRC 235 (2005)  
MATERIALS LICENSE; June 8, 2005; FIRST PARTIAL INITIAL DECISION (Environmental Contentions); LBP-05-13, 61 NRC 385 (2005)

SAVANNAH RIVER MIXED OXIDE FUEL FABRICATION FACILITY; Docket No. 070-03098-ML  
MATERIALS LICENSE; February 2, 2005; MEMORANDUM AND ORDER (Granting Applicant's Motion for Summary Disposition on Contention 3); LBP-05-4, 61 NRC 71 (2005)

VERMONT YANKEE NUCLEAR POWER STATION; Docket No. 50-271  
REQUEST FOR ACTION; March 10, 2005; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206; DD-05-1, 61 NRC 225 (2005)

YANKEE NUCLEAR POWER STATION; Docket No. 50-29-OLA  
OPERATING LICENSE AMENDMENT; June 29, 2005; MEMORANDUM AND ORDER; CLI-05-15, 61 NRC 365 (2005)